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ABSTRACT

This course syllabus is the third unit in the elementary teacher preparation sequence developed at the College of Education, University of Toledo. The nine competency-based learning modules included in the syllabus are a) Learning Theory and Motivation; b) Identifying and Specifying Behaviors; c) Observing and Recording Behaviors; d) Behavioral Objectives; e) The Structure of Knowledge; f) Pre-Planning of Instruction; g) Children's Literature: Picture Books for Children; and h) Children's Literature: Poetry for Children. Each learning module includes a list of prerequisite modules, an overview of the module, its objectives, learning activities and materials, and assessment procedures and instruments. (See related documents: SP 007 693, 007 701, 007 703, 007 704, and 007 705.) (HMD)

ED 087723

# Elementary Education

## 312:324

## Modules 1-8

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CG 007 702

THE UNIVERSITY OF TOLEDO

ELEMENTARY TEACHING AND LEARNING I

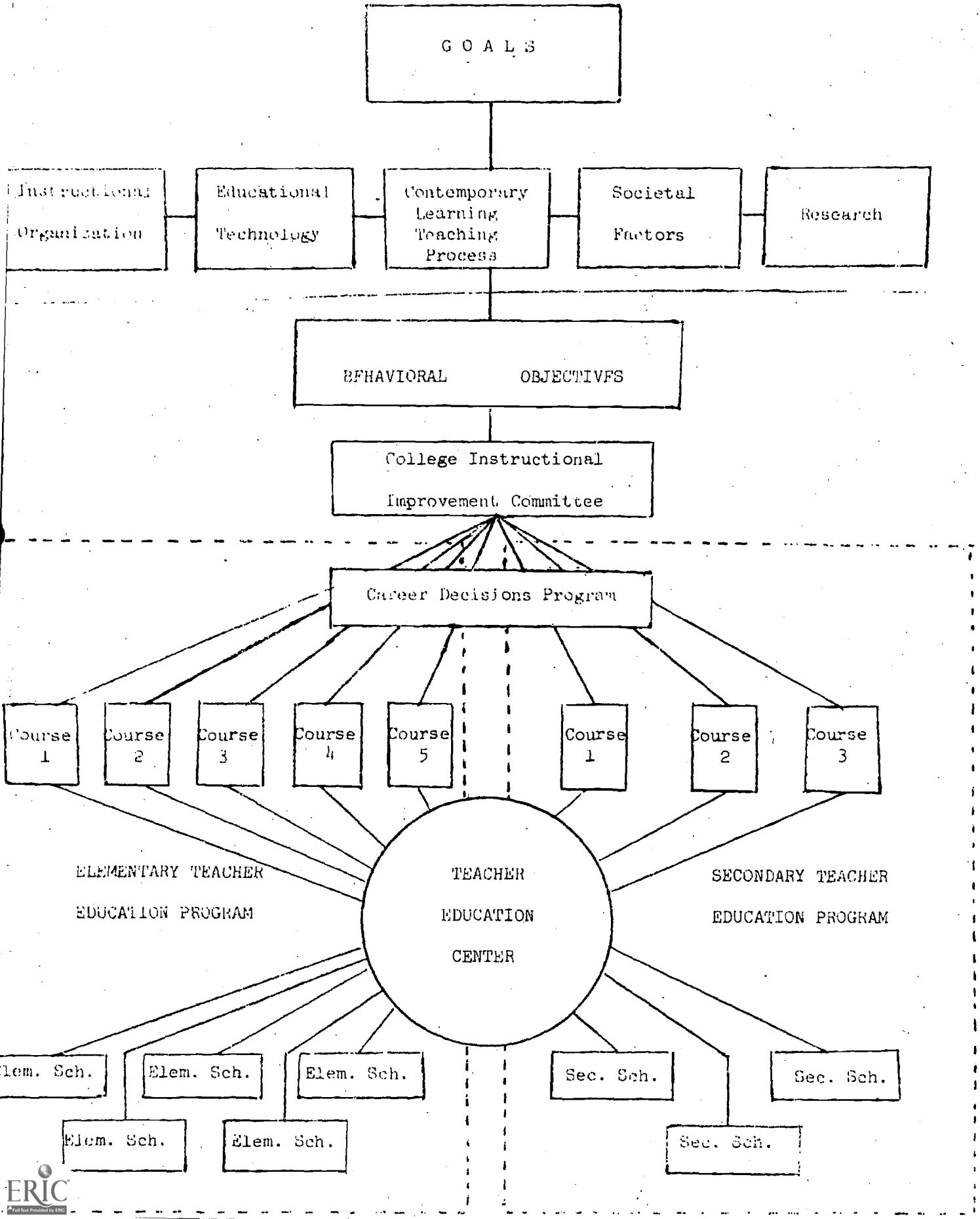
312:324

1. Learning Theory and Motivation
2. Identifying and Specifying Behaviors
3. Observing and Recording Behavior
4. Behavioral Objectives
5. The Structure of Knowledge
6. Pre-planning of Instruction
7. Children's Literature: Picture Books for Children
8. Children's Literature: Poetry for Children
9. Development Stages and Motivation in Children

Included in this notebook are the revised CBTE Modules. New materials as well as handouts which should not be considered prior to their exposure in class, will be distributed by the instructors at the appropriate time. Your reactions to these materials are earnestly solicited and formal assessment devices will be administered periodically to get that feedback. The University of Toledo has developed a model for teacher education and with your assistance we will be able to perfect it.

The University of Toledo CBTE program involves complete attention to all groups involved with teacher preparation and the continued improvement of teachers. For additional information related to the rationale and the other phases of the program (secondary and in-service) the reader is referred to the following four Educational Comment booklets; "Contexts for Teacher Education" 1969; "The Ohio Model and The Multi-Unit School 1971, Field-Based Teacher Education: Emerging Relationships" 1972 "Teacher Education for an Urban Setting, and Partners for Educational Reform and Renewal: Competency-Based Teacher Education, Individually Guided Education, and Multi-Unit School by Dickson, Saxe, et.al. The latter is published by McCutchan Publishing Corp. and the booklets by the University of Toledo College of Education. The diagram on the following page, illustrates the interrelationship between the goals of program, the structure of the curriculum and the laboratory (the schools).

A MODEL OF A COMPETENCY BASED TEACHER EDUCATION PROGRAM



University of Toledo

Course 312:324

# Module 01: Learning Theory and Motivation

Fall 1973 Revision/Meinke

Module One

I. Department/Context: Educational Psychology/Contemporary Teaching Learning Process

II. Subject: Motivation/Principles of Motivation

III. Title: Motivation Module

IV. Prerequisites: None

V. Overview:

This module was designed to provide a demonstration of the principles of motivation that you could implement as a classroom teacher in order to facilitate the involvement of your pupils in particular learning tasks. The principles of motivation as outlined by Klausmeier and Ripple (1971) will be illustrated by means of participation demonstration. Your skill in the utilization of these principles will be assessed by observation of you as you develop a learning task with a group of pupils in your particular school assignment.

VI. Objectives:

A. The student will be able to list seven of eight principles of motivation and describe behaviors associated with seven of Klausmeier's eight principles of motivation.

B. Given a small group of six children, the student will be able to motivate four of the six pupils to finish an appropriate task to a specified level of proficiency using Klausmeier's principles of motivation.

VII. Activities:

A. Take the pre-test for this module. If adequate criterion level is met, proceed to implement these principles of motivation in a classroom situation in which you can be observed by your school facilitator. If you did not reach criterion, be sure to attend class when these principles will be demonstrated for you.

B. Instructional Alternatives.

1. Attend demonstration lecture discussion session on Klausmeier's principles of motivation.
2. Read chapter nine of Klausmeier and Ripple's (1971) text.

C. Implement a lesson with at least six pupils during which you will use Klausmeier's eight principles of motivation. Arrange to have this lesson observed by your school facilitator.

VIII. Materials:

Klausmeier, H.J., and Ripple, R. E. Learning and Human Abilities: Educational Psychology. (3 ed.) New York: Harper and Row, Publishers, 1971. Chapter 9.

Pre-Test

Motivation Module

1. List and describe behaviors associated with seven of Klausmeier's eight principles of motivation.

1. _____

_____

2. _____

_____

3. _____

_____

4. _____

_____

5. _____

_____

6 _____

_____

7. _____

_____

8. _____

_____

Post-test

Checklist for Motivation Module

The following checklist was developed from Klausmeier and Ripple's (1971) principles of motivation. Further development was shown in his development of IGM for multi-unit schools.

| Principles of Motivation | Observed | Not Observed |
|---|---|---|
| 1. Focus pupil attention on desired learning outcomes. | | |
| 2. Utilize the pupil's need to achieve and other positive motives. | | |
| 3. Help each pupil to set and attain goals related to the school's educational program. | | |
| 4. Provide informative feedback. | | |
| 5. Arrange real life and symbolic models. | | |
| 6. Provide for verbalization and discussion of prosocial values. | | |
| 7. Develop and use a system of rewards necessary to secure sustained effort. | | |
| 8. Avoid procedures that create temporary high stress or anxiety. | | |

Criteria:

| | |
|---|---|
| Total Competency (JC) | 5 checks in observed column |
| Acceptable Competency (AC) | 4 checks in observed column |
| Non-Competency (NC) | 4 checks in observed column |

Five checks in the observed column means that five different principles have been observed.

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Course 312:324

Module 02: Identifying and Specifying Behavior

Fall 1973 Revision/Cohen

312:324

Module Two

I. Department/Context: Contemporary Learning-Teaching Process

II. Subject: Basic Behavioral Operations and Contingency Management

III. Title: Identifying and Specifying Behaviors

IV. Prerequisites: 312:320

V. Overview:

Key Concepts:

1. All learning involves some change in the learner's performance: verbal behavior (e.g., talking, writing) and/or nonverbal behavior (painting a picture, attending a concert).

2. It is expected that persons will choose behaviors to be changed based on reasons that consist of generalizations based on behaviors and identified evidence. (0. 3 and 4).

4. A problem is defined as a combination of statements and/or generalizations about a situation in which persons are behaving.

5. Some behaviors can be performed simultaneously with other behaviors (e.g., sitting at the desk and writing on the paper) and some behaviors cannot be performed simultaneously and are called incompatible behaviors (e.g., sitting at the desk in incompatible with running around the room).

VI. Behavioral Objectives:

1. Given a filmed situation, the student will generate a list of 10 statements about persons in the film, and label the statements as behavioral or as inferential (inferences) with 100% accuracy.

2. Given a list of 10 terms the student will be able to label each term as either behavioral or non-behavioral with no more than one error.

3. Given a list of 10 behaviors, the student will label each behavior as either verbal or non-verbal with 100% accuracy.

4. Given five classroom problems stated in non-behavioral terms, the students will be able to specify two different ways that each problem could be behaviorally written. At least four of the five must be correct.

5. Given a list of behaviors that are to be decreased. The student will be able to correctly specify at least one incompatible behavior for another behavior. For example, behavior to be decreased might be running around the room; incompatible behavior would be walking around the room or sitting at the desk. (Some specific action must be stated as the alternative, not merely the absence of the behavior. Four of the five are to be correctly.

VII. Treatment:

1. Students watch film. They generate statements during large group meeting while instructor writes these statements on the board, accepting all statements, but listing them on the board in two categories, behavioral and inferential. As students pick up the concept, the instructor asks for statements as well as the list placement.

2. Same as above

3. Same as above. Re fer to the classifications on the sheet (cf. materials).

4. From the list of inferences, change them into behavioral statements. It is very important at this time to deal with the problem of negations, that is,to say, Mrs. Brown does not talk to the children, is a behavioral statement but it is referring to something that is not happening, it is not actually referring to a behavior.

5. Discuss: What are incompatible behaviors? Describe incompatible behaviors as behavior which cannot be performed at the same time as the ongoing behavior. For example, you cannot talk while drinking, or swallowing. You cannot sit in your seat and run around the room at the same time.

VIII. Materials:

1. Film: Jack Brogan or another film from the Critical Moments in Teaching series. Welcome to the third grade is a good one.

2. Same as above.

3. Same as above.

List of non-verbal behaviors (see attachment).

4. None.

5. None.

IX. Criteria:

Pre and post test are attached.

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Persons make inferences about others from observing their behavior. You get most of the feedback (or reaction to what you say or do) from persons you are teaching by processing the non-verbal behavior of others. Thus, a valuable objective is to increase your ability to identify non-verbal behavior.

There are a number of "classes" or "groups" of non-verbal behaviors. I have listed some "classes" and some behaviors below.

I. Facial Expressions
- immobile
- raise eyebrows
- grind teeth
- smile
- frown
- eye contact
- looks down

II. Head Movements
- nod
- shakes head
- lays head on desk

III. Hand Movements
- lower or raise hand
- fold arms across body
- arms to sides
- twist hands
- clench fist

IV. Body Movements
- slouch
- shift
- wiggle
- sit
- stand
- lean forward
- lean back
- raise shoulders
- twist
- bend over

V. Voice Modulation
- tone: high, low, nasal, monotone
- speed: fast, slow
- volume: high, low

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Course 312:324

Module 03: Observing and Recording Behavior

Fall 1973 Revision/Cohen and Mutterer

Module Three

I. Department/Context: Contemporary Teaching-Learning Process

II. Subject: Basic Behavioral Operations and Contingency Management

III. Title: Observing and Recording Behavior and Making Generalizations About Behavior Observed.

IV. Prerequisite: Module 2

V. Overview:

In this module on behavior observation, teachers were first asked to select children for observation who were candidates for behavior change, (we called them "children with special needs."). Our students then used the descriptions the teachers wrote to tell why they selected that child for observation, as a base from which to select a behavior to observe (cf. behavioral objective no. 1)

Our students then gathered observational data on these children to meet module criteria. They identified and counted behaviors selected from these non-behavioral descriptions of the child written by the teachers. I am now returning this data to teachers as a team member (Smith Road and McGregor) and as a consultant to the Metropolitan League (Glendale and McKinley). This data is thus being used as a springboard for introducing behavior modification techniques, in the public school. This feedback to teachers has also helped to increase teachers' perception of the team as a contributing organism that meets both inserve and preservice needs. Tom Kunkle and Veronica Murphy from the School Consultants at St. Vincent's Hospital can be called on to do some follow-up consulting with teaching about behavior modification. I have established a working relationship with them and also have determined that they are doing things the way we do them.

Further, the teacher's descriptions and the statements that students generate from films as inferences provide the data that in fact, people do use labels and value judgments to describe children, and in fact, provides the rationale for Behavioral Objective no. 3 and 4. Since the data is useful and going back to the teachers, it is important to have it accurate.

VI. Behavioral Objectives:

1. Given the teachers description of the child assigned to you for observation, restate the description in behavioral terms. Then select a behavior that is to be increased or decreased, or a number of behaviors, for observation in Behavioral Objective 3 (child).

2. Given any behavior, the student will specify exactly what he will count by stating a critical time interval and/or frequency criterion. At least four out of five behaviors must be stated so as to be countable. For example: Behavior: thumbsucking. Count: the number of occurances any finger is in contact with the lips until it is withdrawn. Form Contact: or count the number of ten-second intervals in which there was at least one occurance of finger contact with the mouth.

3. Given an observation form, the student will be able to use a simulated or actual classroom situation to correctly fill-in the following information: The behavior: the person being observed: the name of the observer and any reliability observers: the location of the observation: the total time of the observation: the date of observation: whether or not the behavior is to increase or decrease: the time interval of each observation (if appropriate): the time interval between each observation (if any): and the cumulative number of response frequencies or the cumulative number of critical intervals containing at least one behavior for each days observation. Two consecutive forms must be filled in without error.

4. Given a simulated or an actual situation; three daily frequency recording forms must be tallied and submitted. One based on a student in a classroom: one based on a teacher of that student in that classroom: and also one for the person himself who is working on this module. For observing student and teacher behavior an agreement index (the low score divided by the high score) should be at least .80.

5. In a simulated or actual classroom situation, the student will be able to count for ten consecutive minutes using ten-second observing and ten-second counting intervals, the continuing behavior of any one student. Each counting interval will indicate whether or not the student was on task and whether or not the student was off task. If off task whether the off task responses were N (noise), M (motor movements), P (passive), or A (agressive). (See Meacham and Wiesen, Changing Classroom Behavior page 20 for a detail description of each classification). The percentage of off task intervals out of the total number of intervals should show an agreement index of at least .80. This must be done twice accurately, one as the main observer and once as the reliability observer.

6. Given a filmed situation, the student will be able to generate a list of 10 inferences and to classify them with 95% accuracy according to the following categories:

   a. a generalization based on observed identified behaviors.
   b. a generalization based on observed identified behaviors and identified evidence.
   c. a generalization based on an identified opinion(s).
   d. a generalization based on an identified value(s) (value judgement).

VII. Treatment:

1. Assign a child to each two people.

2, 3, 4, and 5.

- Explain observation forms. Have them practice using the forms using films. Have them practice using the on task-off task form using the TV set over the weekend. Also have them use their TV set to practice counting behaviors.

- Explain carefully what reliability is. Students need to do, in class, the math involved. Practice getting reliability and the 5% on and off task, in class. It was my observation that students were giving each other cues while observing in order to increase their recording reliability. The question to be dealt with is that of "How independent should the observations by and why?" (We figured total 5% on task behavior to be given to teachers only on data which had at least 80% reliability).

- Instruction should be given as to how far apart the students should be and stand while observation is going on, and the extent of the communication they have while observing. Specific directions should be as follows:

  1. stand at least 5 feet apart
  2. communicate only at the start and the end of the observation periods (e.g., each 20 minutes)

- There were some comments made by teachers about sunglasses worn by observers. I would suggest specific explanations about the necessity of decreasing the possibility of the child knowing he has been observed. In more open classrooms, perhaps children do not notice observers as much and sunglasses would be too attention getting.

  It is essential to prepare the teachers ahead of time for this field observation.

- Have student view a film. Have them generate statements. List them via category on the board. Use the instruction sheet (cf. materials).

  Repeat the generation and categorization of statements in small groups with an instructor as facilitator. Have students practice this, and hand in their work. Evaluate it and give them feedback.

  In large-group discussion, discuss the importance of identification of their own statements in selecting behavior to be changed, selecting a behavior to observe, and selecting an incompatible behavior. Relate it back to the teacher's descriptions that were gathered in Module 3. Have groups ask themselves the question: Which of the statements or generalizations that you generate determined your choice of the behavior? What proportion of the statements generated fell into which categories? Discuss the types of information that may be used as "evidence," i.e., research studies vs. personal experience.

VIII. Materials:

1. List of students to observe and descriptions from teachers as to why they were chosen.

2. Two forms: attached Transparencies are attached for explaining the forms.

3. Same as above; forms and sunglasses and watches. (Any film from Crit. Mom. Ser. for Simulation exercise).

4. For the teacher observation, we used a team member instead.

5. Xeroxed sheet from Meacham and Wiesen (see attachment).

6. (Tense Imperfect, a Child Who Cheats*), Welcome to the Third Grade**
From Critical Moments in Teaching series
Instruction sheet explaining the criteria for the four categories.

IX. Criteria:

Pretest for Module 3 included
Posttest for Module 3 included
Pretest for Module 4 is an on-task, off-task behavior form and a Critical Moments in Teaching film, plus an item (Included)
Posttest for Module 4 is as follows: All forms completed from the field experience (see follosing criteria levels) and item for behavioral objective 6.

Criteria for Module 4:

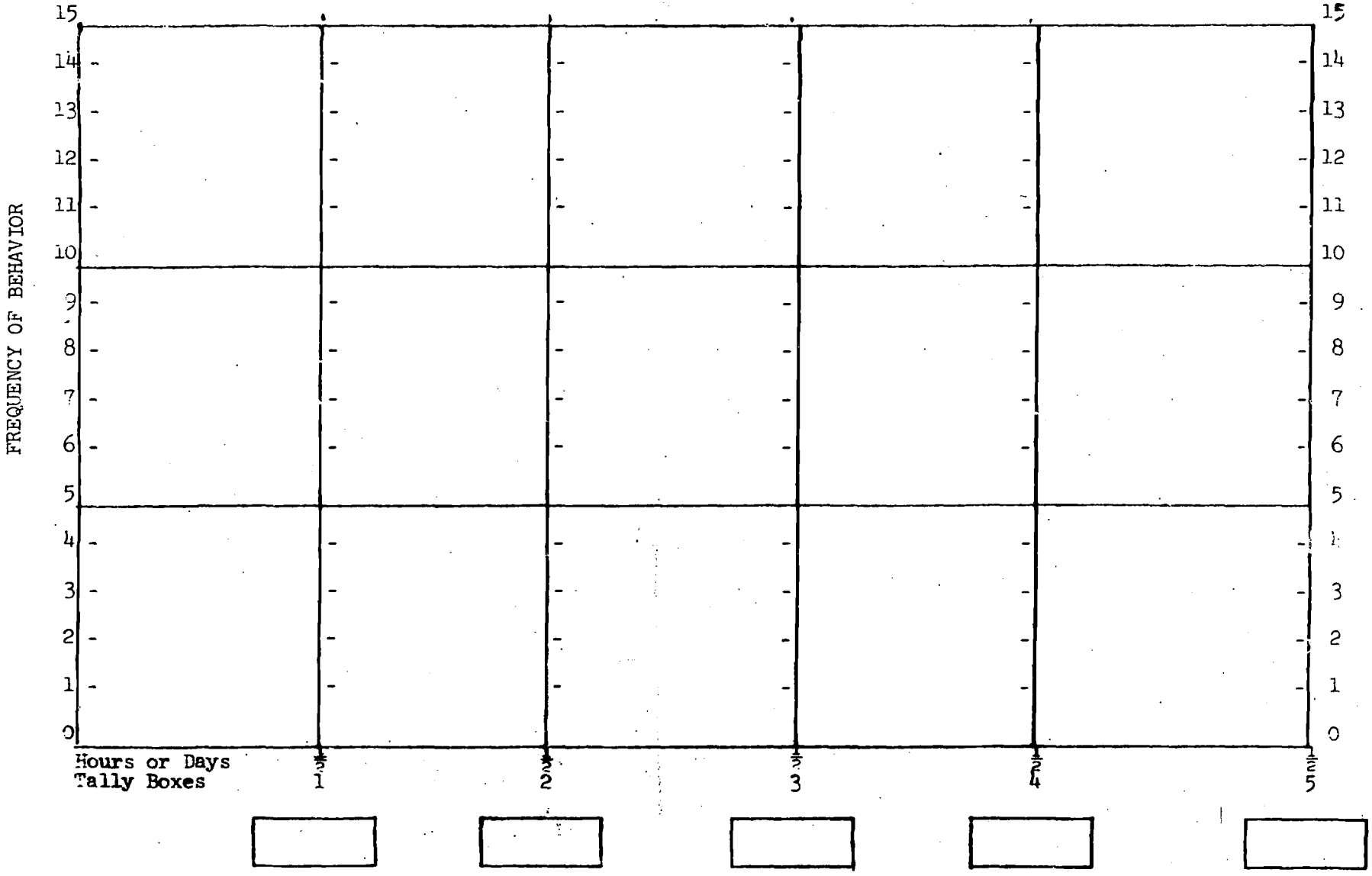
AC on the self form
AC on the teacher or team member for (AC was failure to get reliability)
TC on the child (counting behavior form) (100% accuracy in meeting the behavioral objective)
TC on the child on-task- off-task form
AC on item for Behavioral Objective 6.
(AC was 7 of ten statements categorized correctly)
(TC was 8 of 10 items categorized correctly)

*pre and post tests
**for instruction

Name of Subject:
Grade:
Time of Observation:
Place:
Date:

Behavior Observed:

Observer: _____
Reliability Observer: _____
Time interval of each observation (?): _____
Time interval between each Observation (?): _____



system, the behavior changed to 9 percent gazing, 13 percent talking, and 74 percent working. This was certainly a major shift and was very satisfying to the teacher. A change such as this would have been noticed without explicit data; however, they form a record of comparison at any future date. They provide observable, behavioral evidence of the efficacy of the procedure. The gathering of the baseline data in this applied study did not take much classroom time (45 minutes), nor did it involve very complex recording devices: one stop-watch, pencil and paper, and one graduate student. However, the results for the teacher and the girl were very significant. Not only was there dramatic positive change, but it could be measured, demonstrated, and replicated.

A much more complex series of measurements is illustrated in a study by Thomas et al. (1968). These research psychologists were interested in exploring the relationship between teacher behavior and the disruptive classroom behavior of primary age children. It is worth our while to take a detailed look at their method of getting baserates since they studied many behaviors, all of which interest teachers.

The teacher behaviors were frequency counts that fell into three major categories: (1) disapproving behavior, (2) approving behavior, and (3) instructional behavior. Each of these categories contained several subclasses. For example, disapproving behavior was further divided into (a) physical contact (grabbing, hitting, spanking, shaking, slapping, or pushing a child), (b) verbal (yelling, scolding, raising voice, belittling or making fun of a child), and (c) facial (frowning, grimacing, side-to-side head shaking, and gesturing).

There were similar subclasses for approving behavior and for instructional behavior with just as detailed descriptions. The measures of these behaviors were also in frequency counts. Complex? Perhaps, but illustrative of the kinds of behavior that have significant impact on children.

**The children's behavior was also divided into classes after careful observation and consultation. The research team recognized five classes of disruptive behavior: (1) gross motor (getting out of seat, standing up, walking around, hopping, skipping, jumping, rocking the chair, kneeling in the chair, arm flailing, etc.), (2) noise making (tapping feet, clapping hands, tearing papers, etc.), (3) verbalization (crying, screaming, singing, whistling, laughing, coughing, talking with other children, etc.), (4) orienting (turning head or body toward another person, showing objects to another child, looking at another child, etc.), and (5) aggressions (hitting, pushing, shoving, pinching, slapping, striking, poking with objects, grabbing objects from another child, destroying objects, etc.).

---

From: Changing Classroom **4 and 1 = Motor
2 and 3 = Noise
Behavior: Meacham and Wiesen 5 = Aggression
staring (no eye contact); no movement = Passive

STUDENT ON TASK FORM 1

Observer _____
Reliability Observer _____
No. in class or group _____
General Activity _____
Observation Interval _____ (seconds)

Teacher _____
Grade or Subject _____ Date _____
Time: Start _____ End _____
Page _____ of _____
Record Interval _____ (seconds)

| TIME | ACTIVITY CODE | 10 SECOND INTERVALS (1) 2-Record | | (3) 4-Record | | (5) 6-Record | | Comments |
|---|---|---|---|---|---|---|---|---|
| 1 | | OBSERVE NOW | +MNPA | OBSERVE NOW | +MNPA | OBSERVE NOW | +MNPA | |
| 2 | | | +MNPA | | +MNPA | | +MNPA | |
| 3 | | | +MNPA | | +MNPA | | +MNPA | |
| 4 | | | +MNPA | | +MNPA | | +MNPA | |
| 5 | | | +MNPA | OBSERVE NOW | +MNPA | OBSERVE NOW | +MNPA | |
| 6 | | OBSERVE NOW | +MNPA | | +MNPA | | +MNPA | |
| 7 | | | +MNPA | | +MNPA | | +MNPA | |
| 8 | | | +MNPA | | +MNPA | | +MNPA | |
| 9 | | | +MNPA | | +MNPA | | +MNPA | |
| 10 | | | +MNPA | OBSERVE NOW | +MNPA | OBSERVE NOW | +MNPA | |
| 11 | | OBSERVE NOW | +MNPA | | +MNPA | | +MNPA | |
| 12 | | | +MNPA | | +MNPA | | +MNPA | |
| 13 | | | +MNPA | | +MNPA | | +MNPA | |
| 14 | | | +MNPA | | +MNPA | OBSERVE NOW | +MNPA | |
| 15 | | OBSERVE NOW | +MNPA | OBSERVE NOW | +MNPA | | +MNPA | |
| 16 | | | +MNPA | | +MNPA | | +MNPA | |
| 17 | | | +MNPA | | +MNPA | | +MNPA | |
| 18 | | | +MNPA | | +MNPA | | +MNPA | |
| 19 | | | +MNPA | | +MNPA | | +MNPA | |
| 20 | | | +MNPA | | +MNPA | | +MNPA | |

On-Task=_____
Off-Task=_____

A = aggression
N = noise
M = motor
P = passive (oth

A+M+N+P=_____ ÷ Intervals_____ = _____

Reliability _____

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Instruction sheet Module 4, Behavioral Objective 6,

Given: An inference is a statement (generalization derived from known facts or evidence, or from assumptions, i.e., from information you take for granted. "To infer" suggests that you have come to a conclusion by reasoning. (Webster's Dictionary paraphrased)

Category a: a generalization based on observed identified behaviors.

Criteria: all terms are behavioral

Example: Julie stays on the playground after the bell rings.
John is always late to class.
Jerry reads at a pace slower than Johnny.
Angela runs into people in the halls.
Miss Jones repeats statements that the children have made.
Miss Smite talks to children who raise their hands.

Category b: a generalization based on observed identified behaviors and identified evidence.

Criteria: all terms are behavioral, and the statement is supported by evidence. This evidence includes both behavioral evidence and/or evidence from books, e.g., Holt and Vargas.

Example: Sheila rides her bike to school every day that it doesn't rain; she rode it Monday through Friday of the first two weeks of observation, and on Monday, Wednesday, and Thursday of the second day of observation. Tuesday and Friday it rained.

Miss Smite talks to children who raise their hands; when her talking behavior was counted, there were 13 responses to children who had raised their hand prior to her response, and only one talking response to a child who did not have his hand raised prior to the response.

Because Miss Hope frown and consistently points out errors during individual conferences, the children say they have other work to do during conference time; this week Miss Hope was frowning during 12 of the 15 observad intervals, and she pointed out 16 errors out of a total of 23 verbal responses. 20 children asked to come for conference replied they were working on _____(subject); 3 children went to conference.

Vargas states that children avoid activities that are associated with Punishment or failure. (p. 25).

Category c: A generalization based on an identified opinion(s)

Criteria: not all terms are behavioral

Example: John avoids math, listens in social studies, like to ride his bike.

Category d: a generalization based on an identified value(s) (value judgment).

Criteria: The statement uses terms which connote the approval or disapproval on the part of the person making the generalization. John is a lousy reader; and it's Miss Smite's fault because he never gets a chance to respond in class which is a poor teaching technique. Miss Smite ought to let him respond.

## Observation Procedures*

The basic data for the study consisted of the relative frequency of occurrence of classes of child behaviors in relation to classes of teacher behaviors utilizing rating schedules to be described. One to three observers were placed in the classroom each morning from approximately 9:15 to 10:00 a.m. While the students were completing reading and reading workbook assignments. To insure obtaining a daily sample of both child and teacher behaviors during this 45-minute work period, a 20-minute observation time was decided on for both child and teacher observations. Thus, even if only one observer was present, the relevant information could be obtained. This time restriction limited the number of children who could be observed each day. Ten children were selected for observation each morning by drawing numbers from a hat. During Baseline, and the first No Praise condition a no-replacement procedure was used so that all children had to be observed before a child's number could be drawn a second time. At the start of $Baseline_2$ this restriction was removed. Through the use of a numbered seating chart, the observers recorded the behaviors of selected children in the order in which they were chosen. Five extra numbers were drawn each day to provide observation targets in case one or more of the first 10 subjects drawn were not available for observation. Target children were observed for 2 minutes each. Each minute was divided into six 10-second intervals. Observers were trained to record classes of behavior which occurred in a given interval. Recordings were made during the first five intervals of each minute. During the sixth 10-second interval the observers made notes, checked for synchronization, and/or prepared to switch to a new child. Thus, the daily child observation sample consisted of ten 10-second observation intervals on each of 10 children.

Teacher behaviors were recorded on a similar schedule, the only difference being that for teacher behaviors each occurrence of a response in a specified class was recorded (frequency measure), whereas for child behaviors a given class of behavior could be rated only once in a 10-second interval. This difference in procedure was necessitated by the greater difficulty in separating child behaviors into discrete response units. Observers used a clipboard, stopwatch, and a recording sheet which had spaces for 100 observation intervals, guides for computing reliability, and a place for comments.

Undergraduate university students were hired and trained to collect the data. Each observer memorized the definitions of classes of child and teacher behaviors. Pre-baseline training in recording of behavior was carried out in the experimental classroom to allow the children to become accustomed to the presence of the observers. The children were already well adapted to the classroom before observer training was started. Observers were instructed to avoid all interactions with the students and teacher while in the class or on the school grounds. At the scheduled time they would enter the class, walk directly to chairs provided for them, sit down, and begin the observations. A hand signal was used to insure synchronization of observation times. Initially two observers were scheduled to observe on Monday, Wednesday, and Friday, and two on Tuesday and Thursday. When a systematic difference developed between the two sets of observers, one of the Tuesday-Thursday observers was placed on a three-day-a-week schedule to tie the two sets of observations together with reliability checks. Thus, on some days there were as many as three observers in the classroom. The number of observers in the classroom varied from one to three. Due to illness or the need to obtain observations in other classroom, there were times when only one observer was available. Observers were not informed of changes in experimental conditions.

* DON THOMAS, et al. JABA SPRING, 1968

## Classes of Teacher Behaviors: The Independent Variable

The behaviors emitted by the teacher were defined as belonging to three general classes: (1)Disapproving Behavior, (2)Approving Behavior, and (3) Instructional Behavior. Disapproving and Approving Behaviors were rated only when they immediately followed discriminable child behaviors falling into inappropriate or appropriate classes (see below).[2] Listings were made of the teacher behaviors that could occur within each class.

The general class of Disapproving Behavior included Physical Contact, Verbal, and Facial subclasses. The subclasses of Physical behaviors included forcibly holding a child, grabbing, hitting, spanking, shaking, slapping, or pushing a child into position. The Verbal subclass of Disapproving Behaviors included yelling, scolding, raising voice, belittling, or making fun of the child, and threats. Threats included "if-then" statements of loss of privilege or punishment at some future time. For example, the teacher might say to the class, "If you don't remain quiet, you will have to stay in from recess." The Facial subclass of Disapproving Behaviors included frowning, grimacing, side-to-side head shaking, gesturing, etc.

The general class of Approving Behaviors also included Physical Contact, Verbal, and Facial subclasses. Approving Physical Contacts included embracing, kissing, patting, holding hand or arm of child, or holding the child in the teacher's lap. Approving Verbal comments included statements of affection, approval, or praise. Approving Facial response was rated whenever the teacher smiled, winked, or nodded at one or more of the children.

The general class of Instructional Behavior included any response from teacher which involved giving instructions, information, or indicating correct responses.

In addition to recording the above classes of teacher behavior, note was taken of those times when the teacher terminated social interaction by turning out lights and saying nothing, turning her back on the class and waiting for silence, or stopping talking and waiting for quiet.

As noted earlier, the observers recorded every teacher response falling in a given class. Thus, the measures of teacher behaviors are frequency counts.

## Child Behaviors: The Dependent Variable

The classes of child behaviors were developed by categorization of behavior occurring with some frequency in the pepertoire of problem children (Becker et al., 1967). It was assumed that certain behaviors, because of their common topography, could be grouped together. Five classes of Disruptive Behavior (Gross Motor, Noise Making, Orienting, Verbalizations, and Aggression) and one class of Appropriate Behavior (Relevant) were defined. Behaviors not specifically defined were rated in a separate category (Other Task). Disruptive Behaviors were essentially behaviors apparently incompatible with good classroom learning conditions.

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[2] As it turned out, approval following inappropriate behavior occurred only three times and disapproval following appropriate behavior did not occur. Also, this teacher did not make non-response-contingent approval or disapproval comments. Thus, we were dealing essentially with two response-contingent classes of teacher behavior.

Included in the category of behaviors labeled as Gross Motor activities were: getting out of seat, standing up, walking around, running, hopping, skipping, jumping, rocking chair, moving chair, moving chair, sitting with chair in aisle, kneeling in chair, arm flailing, and rocking body without moving chair.

The category of Noise Making was rated with the stipulation that the observers must hear the noise as well as see the noise-making action, and included tapping feet, clapping, rattling papers, tearing papers, throwing books or other objects onto desks, slamming desk top, tapping objects on desk, kicking desk or chair, and scooting desk or chair.

The Verbalization category was rated only when the observer could hear the response. Lip movements alone were not rated. Carrying on conversations with other children, calling out teacher's name to get her attention, crying, screaming, singing, whistling, laughing, and coughing were included in the category.

The Orienting class of behaviors required that the child be seated. Turning of head or head and body toward another person, showing objects to another child, and looking at another child were rated. Looking behaviors of less than 4-seconds duration were not rated except for any turn of more than of more than 90 degrees from the desk. When an Orienting response overlapped two rating intervals, and could not be rated in the first interval, because it began too late in the interval to meet the 4-second criteron, it was rated in the second interval.

Aggression was defined as hitting, pushing, shoving, pinching, slapping, striking with objects, poking with objects, grabbing objects or work belonging to another, knocking neighbor's property off desk, destroying another's property, throwing objects. No judgments of intent were made.

Appropriate behaviors were labeled Relevant and were made more easily identifiable by restricting the observations to a period in the morning when all of the children were preparing reading and workbook assignments. Specific Relevant Behaviors were: looking at the teacher when she was speaking to the entire class or to the child being observed, answering questions of the teacher, raising hand and waiting for teacher to respond, writing answers to workbook questions, looking at pages of text in which reading was assigned. It was required that the entire 10-second interval be filled with on-task behavior before the Relevant rating was made.

When a child being observed performed a response not defined by one of the categories of Disruptive Behaviors or by Relevant Behavior, a rating of Other Task was made. The Other Task rating was incompatible with Relevant, but could be recorded in the same interval as any or all of the categories of Disruptive Behavior.

When rating the children, the observers were instructed to record each class of behaviors which appeared in an interval regardless of how many other classes had already been recorded in that interval. All five categories of Disruptive Behaviors and the Other Task category were compatible with each other. Relevant Behavior was incompatible with the other categories. No category of behavior was rated more than once in an interval If a child was conversing with his neighbor, and he made two verbal responses in one interval, this class of behaviors was recorded only once. Thus, each child-behavior measure was a record of intervals in which the response occurred, rather than a count of the number of discrete responses as in the recording of teacher's behavior.

The overall level of Disruptive Behaviors was defined as the percentage of intervals in which one or more Disruptive Behaviors occurred.

## Reliability

Two types of reliability were calculated. Reliability 1 reflects simply the degree to which two observers obtained the same score for each category of behavior during a 20-minute observation period. The smaller score is divided by the larger. Reliability 1 most appropriately applies to the data as reported in Figure 1, since these are averages for an observation period. Random errors tend to cancel each other out when a score is based on a series of observations and a reliability measure should reflect the gain in accuracy obtained by averaging. For training purposes, and for greater confidence in the accuracy of the observation procedures, a second type of reliability was also calculated (Reliability 11). Reliability 11 required that the same behavior category be recorded in the same interval by each observer to define an agreement. Reliability 11 was calculated by dividing the number of agreements by the number of agreements plus disagreements.

During the pre-baseline observer training, reliability checks were required for every observation. Before baseline observations were started, consistent reliabilities (Type 11) above 80% were required. Reliability 1 data based on a weighted average of the reliabilities of the child-behavior codes are reported in Figure 1, as are the average reliabilities by conditions for teacher behaviors. Comparable Reliability 11 data averaged 82.6% for child behaviors and 83.2% for teacher behaviors. Reliabilities for individual categories are well represented by these averages.

## Sequence of Conditions

The first phase of the study (Baseline), consisted of measuring both teacher and child behaviors. No attempt was made to manipulate teacher behavior.

The second phase (No Approval) was defined by the absence of Approval Behaviors. The teacher discontinued the use of praise statements and used only contingent Disapproving Behaviors to control the Children.

University of Toledo

Course 312:324

Module 04: Behavioral Objectives

Fall 1973 Revision/Yorke and Gentry

312:324

Module Four

I. Department/Context: Contemporary Learning-Teaching Process

II. Subject: Cognitive, Affective and Psychomotor Domain

III. Title: Behavioral Objectives

IV. Prerequisites:

V. Overview: The student will learn to write, revise, and use behaviorally stated terminal performance and enabling objectives in the three domains, at two levels of the taxonomy.

VI. Behavioral objectives:

1) Given a list of statements, the student will be able to label each statement as either an educational goal or a behavioral objective, without error.

2) Given a list of objectives, the student will be able to identify the audience, behavior, conditions, and degree with less than 10% error.

3) Given a list of objectives the student will be able to discriminate between those which are adequate and those which are inadequate in terms of audience, behavior, conditions, and degree (ABCD) with 90% accuracy.

4) Given a list of objectives the student will be able to rewrite those which are not stated in behavioral terms so that they include audience, behavior, conditions, and degree (ABCD) without error.

5) Given descriptions of each of the cognitive, affective, and psychomotor domains the student will be able to match each with its name, without error.

6) Given a list of objectives the student will be able to identify each as a cognitive objective, an affective objective, or a psychomotor objective, without error.

7) Given 2 educational goals in the cognitive domain, the student will be able to write behavioral objectives including audience, behavior, condition, and degree (ABCD) at the lowest level of Bloom's taxonomy and a level higher than the lowest level without error.

8) Student will write two behavioral objectives using ABCD criteria in affective domain without error.

9) Student will write two behavioral objectives using ABCD criteria in psychomotor domain without error.

VII. Preassessment:

Take the pretest. If successful (meet criteria specified by objectives) go on to next module. If not successful complete the following activities:

VIII. Learning Activities:

1. Read "10 Reasons for Not Using Behavioral Objectives" by Popham.

2. Work through the programmed instruction packet, "What You've Always Wanted to Know About Performance Objectives But Were Afraid to Ask."

3. Read Writing Worthwhile Behavioral Objectives, Julie Vargas.

OPTIONAL:

4. Work through Preparing Instructional Objectives, program by Robert Mager. (Objectives: 1, 2, 3, 4, 5, 6, 7, 8, and 9)

5. Listen to tape "Writing Behavioral Objectives" and complete worksheet, adapted from Thorwald Esbensen. (Objectives 1, 2, 3, and 4)

6. View slide-tape presentation "Educational Objectives" by James Popham and complete worksheet (Objective 1)

7. Read handout "Teaching Aimed at Learning Above Mere Recall of Knowledge" by Bloom. (Objective 7)

8. Work through programmed instruction, An Introduction to the Taxonomy of Educational Objectives by Clyde St. Romain. (objectives 5, 6, and 7)

9. Read "Writing Behavioral Objectives" handout adapted from Thorwald Esbensen. (Objectives 1, 2, 3, and 4)

10. See handout "Illustrative Verbs" from Norman E. Gronland Stating Behavioral Objectives for Classroom Instruction. (Objectives)

11. Study handout "Behavioral Objectives as Competency Statements" (Objective 1)

12. Attend scheduled help session #1.

13. Attend help session #2, optional for student.

IX. Postassessment:

Take the posttest. If successful go to next module. If unsuccessful, either recycle the module or see your advisor for an alternative method for meeting the objectives.

University of Toledo

Course 312:324

Module 05: The Structure of Knowledge

Fall 1973 Revision/Wilhoyte and Snyder

312:324

Module Five

I. Department/Context: Contemporary Learning-Teaching Process

II. Subject/Topic: Cognitive Domain

III. Title: The Structure of Knowledge

IV. Prerequisites: Modules 1, 2, 3, and 4

V. Preview of Module 05

The purpose of Competency Based Education

Traditional programs in teacher education made many claims that often were not fulfilled. Such objectives as "preparing students for responsible citizenship," "preparing students to function in a free, democratic society," and "preparing students to live the good life," are but a few of the often stated "educational objectives."

What kind of evidence would be against such claims? Or, for that matter, what would count as supportive evidence?

When it became increasingly evident that the schools were not always producing responsible citizens; and when second and third looks cast some doubt about how free and how democratic our society really is; and, when people, who were prepared to live the good life, examined their lives and judged them "not so good"; then such questions arouse as "are the schools really doing what they claim to be doing?" Are the schools accountable?

There is not anything wrong with the goals that were stated. Just as there is not anything wrong with saying "Johnny has a learning problem" or "Mary has a poor self-image." The problem is that they were too general - too obscure; they were not stated in behavioral terms.

In other words, traditional teacher education programs left a lot to chance. They attempted to do everything. But, in actuality, did not really do anything. Competency based education, on the other hand, does not state grandiose, largely rhetorical, goals. It does not leave much to chance. The goals that are stated are verifiable, testable, measurable, this is what "behavioral" means.

The purpose of the minimodule was twofold: (1) to establish an awareness of, or sensitivity for, statements that are not stated behaviorally, and (2) to attain competence in writing statements in behavioral terms.

Modules 1 and 2 were designed to (1) extend the competence attained in the minimodule to more complex behaviors, and (2) to begin utilizing this competence in changing behavior. The goal of schools is to insure that learning occurs. But this hypothesis (that learning occurs) is only testable as behavior change.

Module 1 provided the necessary behaviors for either of the two principal areas where teachers are expected to perform:

(1) "discipline" and,
(2) cognitive, affective and psychomotor learning

Probably no where in teacher education programs has outcome been more left to chance than in the area that has been traditionally called "discipline." Module 2 provided the necessary skills (not necessarily sufficient) for modifying behavior.

In Module 3 the focus was not on writing behavioral statements to describe presently manifested behaviors. Instead attention was focused on stating educational goals (expected or desired behaviors) in behavioral terms. After completing module 3, the student should be able to write behavioral objectives at any level in any of the three domains.

Module 3 was extensive and was concerned with the problem of stating objectives that are measurable, testable, verifiable, etc. Module 4, on the the other hand, will be intensive and will be concerned with how to attain those stated objectives. Module 4 will focus on only the first four levels in the cognitive domain. Module 4 will also function as an introduction to Module 5, which will again, (like module 3) be more extensive.

VI. Objectives:

A. Entering Objectives;

1 The prospective elementary school teacher will examine a typical learning problem in one of the subject matter fields in the context of how an experienced, and competent teacher orders the components of the curriculum. The prospective teacher will simulate the cognitive behaviors of the student and distinguish those curriculum components which, as stimuli, elicit only knowledge (the product of memory), from those curriculum components which, as stimuli, elicit responses at one of the levels of understanding in Bloom's Taxonomy: Cognitive Domain.

B. Terminal Performance Objectives;

1 The prospective elementary school teacher will examine a typical learning problem in one of the subject matter fields in the context of how an experienced, and competent teacher orders the components of the curriculum. The prospective teacher will simulate the cognitive behaviors of the student and distinguish those curriculum components which, as stimuli, elicit only knowledge (the product of memory), from those components which, as stimuli, elicit responses at one of the levels of understanding in Bloom's Taxonomy, Cognitive Domain. Each student will distinguish (1) ordered curriculum components which elicit a response of comprehension from (2) ordered curriculum components which elicit a response of application from (3) ordered curriculum components which elicit a response of analysis at a level of accuracy greater than chance (one correct response in four trials).

2 The prospective elementary school teacher will examine structured curriculum components utilizing material from various content areas and separate those components wherein the learner is expected to function or operate at one of the first four levels in Blooms Taxonomy, Handbook I; Cognitive Domain, from those components wherein the learner is expected to function at any of the other three cognitive levels. Sorting will be at the level of 90 per cent correct choices.

VII. Pre-Assessment

Read the preliminary paragraphs and then go through the test items. Determine the cognitive level (knowledge, comprehension, application, analysis, synthesis, or evaluation) elicited by the item. If the item elicits a knowledge response, pleace a "K" in the blank by the item. If the item elicits a comprehensive response, place a "C" in the blank by the item. If the item elicits an application response, place an "AP" in the blank by the item. If the item elicits an analysis response, place an "AN" in the blank by the item. If the item elicits a snythesis response, place a "S" in the blank. Or, if the item calls for evaluation, place an "E" in the blank.

Mrs. Jones teaches in a modern middle school. She has been teaching for two years. During this time she has become increasingly aware of the difficulty that students have "putting their knowledge into practice." They "know the material," but when they are given "word problems" to solve, or when they are put into situations that are like those that they will encounter in "real life," they "look confused" and ask for help. She has heard many times, and takes seriously, the admonition to begin where the children are. She, accordingly, decides to give her students a preliminary learning experience which will provide her with data as to how well the children understand the various concepts.

Directions to the children: Read the following paragraphs and then answer the questions that follow each paragraph. Circle the letter of the correct choice.

Johnny and Billy are friends. Each is told by his mother to go to the store and buy a package of Super See laundry detergent. Each is given a dollar and instructed to buy the size package that produces the most detergent for the money spent. Johnny and Billy discover that Super See is available in two size packages: a 39 oz. package and a 24 oz. package. The 39 oz. package costs $.78 and the 24 oz. package costs $.40.

1. Johnny and Billy were
   a. given the same instructions by their mothers
   b. given different instructions by their mothers
   c. told to buy the cheapest brand of laundry detergent
   d. told to buy the least expensive size package of Super See.

2. Johnny at first decides to buy the 39 ox. package because, his mother told him "to get the most for his money: this interpretation of his mother's instructions is
   a. correct
   b. oversimplified
   c. the most possible interpretation
   d. probably better than any others because of its simplicity.

3. Billy then tells Johnny to buy the 24 oz. package because that is the cheapest (requires less money). Billy's interpretation of his mother's instructions is
   a. correct
   b. oversimplified
   c. the only possible interpretation
   d. probably better than any others because of its simplicity.

4. At this stage
   a. Johnny is right and Billy is wrong
   b. Billy is right and Johnny is wrong
   c. both boys are correct
   d. neither boy is correct

5. Johnny does some arithmetic in his notebook and then states that since 39 goes into 78 2 times, the 39 oz. package is the one to buy. Johnny is
   a. correct
   b. incorrect
   c. may be right or wrong depending on his reasons
   d. correct, but he made a mistake in arithmetic

6. Billy then divides 24 into 40 and gets 1 2/3. He announces that the 24 oz. package is, therefore, the best buy. Billy
   a. is wrong.
   b. is right, even though he made a mistake in arithmetic
   c. may be right or wrong depending on his reasons
   d. is right regardless of his reasons

7. Billy's friend, Henry, then happens to come by. Each boy tells Henry what he did and what he concluded. Henry's reply is that they should have divided 39 by 78 and 24 by 40 in order to find out which size package produces the most detergent for the money spent. Henry
   a. is wrong
   b. does not understand the instructions that the boys had
   c. has presented a valid argument
   d. is right and Johnny and Billy are wrong

8. Billy still insists that he is right. He argues that if one boy can run the distance from one side of the football field to the other side in 2 minutes and another boy can run the same distance in 1 2/3 minutes, the second boy can run faster than the first boy. Billy is
   a. right about the boys and the football field but wrong about the package of detergent
   b. wrong in both cases
   c. right about the packages of detergent but wrong about the boys and the football field
   d. right in both cases.

9. Henry then points out that if someone had used a stop watch and had the two runners run as far as they could run during 60 seconds, they should arrive at the same conclusion. Henry
   a. is correct.
   b. is not correct
   c. is right here, but wrong when he tries to figure out which package of detergent to buy.
   d. is wrong here, but right when he attempts to figure out which package of detergent to buy.

10. In order to decide which package of detergent to buy
    a. if the boys divide the wt. by the cost they get the wt. that each one cent will buy, so if one cent buys more detergent in one case than the other, that is the "best buy"
    b. if the boys divde the cost by the wt. they get the cost of each oz. of detergent, os if an oz. of detergent costs more in one case then the other, that is the "best buy."
    c. clearly it is correct to divide 39 into 78 and 24 into 40, and incorrect to divide 78 into 39 and 40 into 24.
    d. both (a) and (b)

11. If the instructions for the boys running on the football field had been "find out who can run a greater distance in one minute" or "find out who can run across the football field in the shortest time," then
    a. in the first case distance would be divided by the time and in the second case, the time would be divided by the distance
    b. in the first case the time would be divided by the distance and in the second case the distance would be divided by the time
    c. in each case the time would be divided by the distance
    d. in each case the distance would be divided by the time.

12. The method that more "closely" follows the instructions given the boys by their mothers (the size package that produces the most detergent for the money spent) is
    a. to divide the wt. by the cost
    b. to divide the cost by the wt.
    c. to divide 39 and 24 by 78 and 40, respectively
    d. both (a) and (c)

Mr. Smith has a toy wind-up car. He has a "racetrack" 20 ft. long with each ft. and each inch clearly marked. He can wind up the car and place it at the starting position and then press a button that releases the spring and starts the stop watch at the same time. Mr. Smith likes to show boys and girls how his race car works. One day Johnny and Billy drop by his house and ask Mr. Smith to race his car for them. He agrees. The race track is wired so that the stop watch can be stopped at any point along the track when the car runs over the switch. Today Mr. Smith puts the stop watch switch at the 3 ft. point (from the starting point). Mr. Smith presses the starting switch and the car lurches forward. When the car passes the 3 ft. point, the watch is stopped.

13. Mr. Smith's car has gone
    a. 3 ft.
    b. 4 ft.
    c. 5 ft.
    d. 6 ft.

14. Mr. Smith's car traveled for
    a. 2 seconds
    b. 3 seconds
    c. 4 seconds
    d. 5 seconds

15. Mr. Smith's car traveled
    a. 3 ft. in 2 seconds
    b. 3 ft. in 3 seconds
    c. 2 ft. in 2 seconds
    d. 2 ft. in 3 seconds

16. Mr. Smith's car, therefore, traveled
    a. at a rate of 1 ft. per second
    b. at a rate of 2 ft. per second
    c. at a rate of 3 ft. per second
    d. at a rate that was not constant

17. Mr. Smith decided to put on a special show for the boys. For this he used three stop watches and stop switches. Each of the watches is started at the same time when the car starts going. A stop switch is placed at the 1 ft. mark, at the 3 ft. mark and at the 6 ft. mark. The car and watches are started. The first watch is stopped at the 1 second mark. The second watch is stopped at the 2 second mark and the last watch is stopped at the 3 second mark. The car, therefore,
    a. traveled 9 ft. in 6 sec.
    b. traveled 6 ft. in 3 sec.
    c. traveled 3 ft. in 3 sec.
    d. traveled 3 ft. in 6 sec.

18. The car then traveled
    a. at a rate of 1 ft. per second
    b. at a rate of 2 ft. per second
    c. at a rate of 3 ft. per second
    d. at a rate that was not constant.

19. If Mr. Smith wanted to place a stop switch on the race track to stop a 4th watch at the 4 sec. mark, he would place it at
    a. the 7 ft. mark
    b. the 8 ft. mark
    c. the 9 ft. mark
    d. the 10 ft. mark

20. If Mr. Smith placed a stop switch on the race track to stop the 4th satch at the 4 sec. mark, and the car continued to travel during the 4th second as it has done during the first three seconds, the car
    a. would travel 3 ft. during the 4th second
    b. would travel 4 ft. during the 4th second
    c. would travel 5 ft. during the 4th second
    d. would travel 6 ft. during the 4th second

21. In order to say how fast (at what rate) Mr. Smith's car or any other moving object, is traveling,
    a. we only have to divide the distance traveled by the time spent traveling (D/T=r)
    b. we have to divide the distance traveled by the time spent traveling (D/T=r)
    c. we only have to divide the distance traveled by the time spent traveling and, what we get is the average rate of speed.
    d. both (b) and (c)

22. If we said that Mr. Smith's car was traveling at a rate of 2 ft. per second and predicted that in 100 seconds the car would have traveled 200 ft. and the car continues to travel as it did during the first 4 seconds
    a. we would be correct in our prediction
    b. we would be incorrect in our prediction
    c. we would probably be correct in our prediction
    d. we would not have any basis for saying whether we would be correct or incorrect.

Eeene, Meene, Meine, Moe and Edward had been fishing on Lake Erie. A sudden storm that even the Weather Bureau did not predict came up, and the 6 ft. waves caused their boat to capsize. Fortunately, they were within swimming distance of a very small uninhabited island. They swam ashore and soon the storm had passed. The sun came out and, it wasn't long before they were dry and comfortable. There was, however, a problem. It might be hours or even a day or two before rescue boats would find them, and all the food they had was a pie that Moe's wife had packed in a plastic, waterproof container. She even included a knife, because Mrs. Marx (Moe's last name is Marx) wanted Moe to share the pie with his friends.

Under "normal" conditions it would not particularly matter whether each person received a wedge of pie exactly the same size as his companions. But Meine was quick to point out that the utmost care should be taken to be sure that the pieces were all the same size. Meene, being a carpenter by trade, always carried his flexible ruler with him. He produced it and measured the pie around the crust. It was 16 inches.

Eeene did some quick division in his head and said, "5 does not go into 16 an even number of times. Meene did not agree. He claimed that each of the 5 fishermen would get a 3 inch wedge. No one would get any more than any one else. Meine objected and pointed out that a one inch wedge (the remainder) would be left over. He (Meine) thought that, since Meene's wife had made and sent the pie, Meene should, therefore have the extra portion. Eeene agreed, but Moe had another idea. Why not let everyone have an equal chance to get the extra portion. He (Moe) would think of a number between 1 and 10. Whoever guessed closest to the number would get the 1 inch piece in addition to his 3 inch pieces. Edward had been listening but had not said anything. Now he spoke up. "5 really does go into 16 an even number of times. Therefore, we do not have to use either Meine's reasoning or Moe's reasoning. We each get an equal share."

23. Edward
    a. apparently does not understand the problem
    b. is simply wrong, because 5 does not go into 16 an even number of times
    c. is right because everyone will get a 3 in. wedge plus an equal portion of what is left
    d. may be right or wrong depending on what he says.

24. If they follow Edward's advice they will
    a. figure out how to divide the remaining 1 in. wedge into 5 equal parts
    b. think "how many pieces" as well as "how much pie"
    c. feed the 1 in. piece to the fish and each eat his 3 in. piece.
    d. both (a) and (b)

25. If we compare Edward's, Meine's, and Moe's respective solutions, it is clear that
    a. Edward's is best because, not only does everyone get an equal portion of pie, there is also not any wasted.
    b. Moe's is the best because no one will feel like he has been cheated.
    c. Meine's is best because he (Meine) should be rewarded for having such a thoughtful wife.
    d. each of the solutions is of equal value.

Now obtain the key and check your responses. If you have 90% or more correct choices, you have already attained competency.

VIII. Instructional Activities:

Learning Activity #1

Read Chapter I, the Process and the Concept of Inquiry.

Massialas, Byron, Creative Encounters in the Classroom.

Learning Activity #2

Read The Ideas of Structure and Mode of Inquiry, by John D. Haas.

Learning Activity #3

Unfortunately there has been much confusion among the many interpretors of the taxonomy. "Unfortunate" because the purpose of the taxonomy was, and is, to decrease rather than increase confusion. The confusion is basically of two kinds and for one reason. The latter will be discussed first.

"Teachers" have really been tellers rather than teachers. Students and teachers lament about the worthlessness of too much memory (and its product knowledge - the lowest level in the taxonomy) but go right on memorizing and telling, respectively. Lecturing is the method whereby the curriculum components which elicit only knowledge ("what's" as opposed to "whys") are blended with those curriculum components that could elicit understanding on the part of the learner. If the student is successful in sorting these, it is not because of the teacher's efforts, and it may be in-spite of them. To use an analogy; if the what's and why's of curriculum were wood chips and iron filings, respectively, the intellect would be like a magnet: it could separate what is potentially understandable from what can only be memorized and known. Unfortunately telling (such as lecturing) blends the two components to such an extent that at least analysis is required to sort them.

It is therefore, not surprising that confusion was the result of being given a scheme for classifying that which everyone on the education scene talking about but which no one really dealt with directly. It was like being given a net and told to go out and catch red, blue, and green invisable butterflys.

Now for the two kinds of confusion. The difference between knowledge and understanding is a difference of kind. The difference between the 5 levels of understanding are differences of degree and differences of kind. This is why it is much more difficult to distinguish between the 5 levels of understanding as compared to distinguishing understanding from knowing. Also, the lowest level

of knowledge is knowledge of specifics and the highest level of knowledge is knowledge of principles and generalizations.

What, therefore, happened is that educators did not modify their practices to conform to the assumptions of the taxonomy (that cognitive behaviors could be identified.) Rather they forced the taxonomy to correspond to their practices.

The result was: (1) the taxonomy became a logical sorting scheme; the components of curriculum were sorted according to the (logical) meaning if the definitions of the different levels. And (2) (which occurred concomitantly with (1) but is also a consequence of (1) ) all of understanding, as a possibility, was reduced to knowledge, as an actuality. An instance of this is to believe that because a student can state the definition of gravity that be, therefore, understands the concept "gravity."

It is the purpose of competency based teacher education to not leave understanding to chance as traditional education has always tended to do. There are, of course, and have been, individual teachers who have been very successful at facilitating understanding. But these tend to be the exceptions rather than the rule - the teachers who are "born" rather than "made," as it were. This is why so much emphasis is placed on making verifiable (not necessarily verified) claims. The danger of applying competency based techniques, however, should be obvious. The baby might get thrown out with the bath water - that of which a behavioral manifestation is just that: a manifestation, may be reduced to and equated with the manifestation. If this should happen, then competency based education has done a disservice greater than that done by traditional education. The latter merely left understanding to chance; the former, however, would eliminate the possibility of understanding by convincing those concerned that they had attained understanding.

## Learning Activity #3.5
## Advanced Organizers for Learning Activity #4

When responding cognitively to ordered curriculum components, it is fairly easy to distinguish those components that require knowledge from those components that require understanding. But distinguishing between the latter is more difficult.

The basic difference between comprehension and application is: In the case of comprehension, the learner responds to an aspect of a concept; whereas in the case of application, the learner responds to an instance of a concept. For example, compare the following structured curriculum components from a seventh grade class. The concept is "gravity."

1. Mary and Suzie are riding down a hill on their sleds. They discover that Mary always goes farther at the bottom of the hill than Suzie does. Suzie decides that the runners on Mary's sled are smoother. They exchange sleds, but Mary still goes farther. A reason for this is that:
   a. Mary could have newer sled.
   b. Mary could be heavier than Suzie.
   c. Mary could be older than Suzie.
   d. Mary could be taller than Suzie.

2. If the hill got steeper and steeper until finally it became vertical to the ground at the bottom (straight up and down), we would then expect:
   a. Suzie to fall faster than Mary.
   b. Mary to fall more like a rock falls and Suzie to fall more like a feather falls.
   c. Mary to not fall any faster than Suzie.
   d. Suzie to not fall any faster than Mary.

3. When astronauts visit the moon, they weigh much less than they do on the earth. This is because:
   a. they are so far away from the earth.
   b. the moon is smaller than the earth.
   c. they lose weight on the long trip from the earth to the moon.
   d. there is not any atmosphere on the moon.

4. Last summer Tommy visited Jamie at his home on the seashore. They discovered that each weighed 103 lbs. This winter Jamie wrote to Tommy at his home in Denver, Colorado, and said that he, Jamie, now weighs 106 lbs. Tommy ran and got on the scale. He discovered, much to his surprise, that he "still weighs" 103 lbs. The problem here is that:
   a. the boys did not weight on the same scale. be giving false readings.)
   b. Tommy's home is at a higher altitude.
   c. Tommy probably grew taller, whereas Jamie got heavier.
   d. Jamie is probably going to be a larger man than Tommy.

Note that the situation involving Mary and Suzie is an instance or application of gravity. It is necessary to provide a problematic situation as continuous with the experiences of the learners as possible. But, then, in order to insure that comprehension occurs, only aspects, rather than the complete instance, should be examined. After the learner has comprehended the concept in one context, then he can apply what he has learned to a different context. Item (1) represents interpretation and Item (2) represents translation--two sub-levels of comprehension. Of course, it cannot be expected that students will comprehend the concept, gravity, merely by examining two aspects of one instance. But, after they are given opportunities to interact with many aspects from many instances, some of which they experience directly, and some indirectly,

then they should be able to apply what they have learned in a context which is new to them. (E. L. Thorndike called this ability to transcend contexts "transfer.")

After students understand (comprehend) a concept so well that they can use the concept in problem-solving contexts that are new to them (application), why is their education not then complete? Why are higher level cognitive processes necessary? Because the activity of transferring from the contexts in which comprehension occurred to the many other possible contexts is not simple.

When inconsistencies, contradictions, paradoxes, etc. arise, confusion is the result. In order to eliminate the confusion, the student must do analysis.

Curriculum components can be structured so as to require analysis. Item #3 merely presents a different context. But Item #4 presents the concept within a more complex context that forces the student to "think it out" (analyze it).

Other possibilities would be to structure an item around the information that the moon turns on its axis, yet the same face is always toward the earth (if it turns, how can the same face always be toward the earth?). Another possibility would be to present the concept in the context of (1) Why the water in rivers flows as it does. Then include an item applying the concept to the rise and fall of tides; and, finally, include an item in which the water in a river (near a mouth) flows upstream (analysis).

Synthesis consists in reuniting the contextual elements of the concept and, thereby, attaining a better understanding of the concept. "Better", here means that the student, or anyone else for that matter, encounters contexts requiring analysis less frequently not because they are avoided, but because the student is more able to cope with them.

Evaluation consists in making judgments about the adequacy of the problem solving process. A judgment may be according to internal criteria (i.e. consistency) or it may be according to external criteria (i.e., whether a desired ome achieved).

## Learning Activity #4

Read the following paragraphs and then respond to the ordered curriculum stimuli that follow. First simulate the cognitive behavior of the student who is learning a concept or concepts from the area of content in focus. Circle the letter that corresponds to the correct choice.

Then read and follow the instructions given at the end of each section.

For years Mrs. Harsh has insisted that students are poor writers because, "They do not know the fundamentals of grammar." As might be expected, Mrs. Harsh sees to it that her students "know their grammar."

Mrs. Harsh is particularly proud of her lesson on sentences, and "the subject of a sentence." She has spent the first 20 minutes of class defining the different kinds of subjects. She has defined "compound subje " and given an example using a sentence ccntaining a compound subject "We and they went to town." She asks the class to identify the compound subject and there is a roar as everyone says "we and they."

Willie Jones, a well-known trouble maker, then holds up his hand and says, "Mrs. Harsh, suppose I said, 'Us and them went to town.' Would I be wrong?" Mrs. Harsh sighs, grunts, and frowns and then says, "Of course, Willie!" Willie then says, "But why, Mrs. Harsh." Mrs. Harsh intensifies her sighs, grunts, etc. and exclaims, "Because, Willie, us and them are always in the objective case."

Mary Smith, who is always "well-behaved" doodles on her notebook:

> Why doesn't Willie ask, "Why aren't us and them ever in the nominative case?' I bet old Lady Harsh would say "Because they are never in the nominative case." She never explains anything.

Mr. Burzynski is a teacher in the same school as Mrs. Harsh. Last year they often sat in the teacher's lounge discussing the television program All In the Family. However, one day their discussion became very heated and ended with Mrs. Harsh screaming that all dumb Pollocks are alike and Mr. Burzynski yelling back that no hung up, narrow minded, bigot can be reasoned with.

Mr. Burzynski's "teaching style" is quite different from Mrs. Harsh's. He is opposed to teaching grammar the way that Mrs. Harsh does or, for that matter, teaching grammar at all. He argues that rules of grammar are like the meanining of words; they merely reflect the way the majority of the people use language. He is well known for his statement, "When Mr. Webster sat down to write the dictionary, he did not have divine insight from the initiator of meanings. He merely had to [illegible]mine meanings from the way that people use words in ordinary discourse.

Similarly, rules of grammar were not formulated by an oracle and transmitted via ESP to persons who write grammar books and persons who teach grammar lessons. No. Rules of grammar are merely conventions that most people adhere to when they use language."

Mr. Burzynski always looks forward to BIE (Business-Industry-Education) day, when school is dismissed for one day while students visit businesses and industries within the local area. When they return to school he has them write an essay. "This is an opportunity for them to learn creative expression." The principal, however, has had quite a few complaints from parents who say that their children aren't learning anything from Mr. Burzynski. The principal, Mr. Don Little, usually does not interfere with what his teachers do. But, in this case, he asks Mr. Burzynski to give an objective test so that he will have some "hard data" to show the parents.

Mr. Burzynski agrees, with some reluctance, and, after the next BIE day he gives his students the following "objective test".

Read each item and put a check mark by the right answer.

1. BIE day is a worthwhile activity because

   (a) the board of education approves of it.
   (b) the Supt. of Schools requires it.
   (c) it provides enriching experiences for boys and girls like us.
   (d) parents support it with their tax money.

2. On BIE day we

   (a) tour businesses.
   (b) tour industries.
   (c) neither (a) or (b).
   (d) both (a) and (b)

3. BIE day has been a practice in this school (remember your notes) for

   (a) 6 yrs.
   (b) 10 yrs.
   (c) 20 yrs.
   (d) 1 yr.

4. BIE day

   (a) always comes in the spring.
   (b) always comes in the fall
   (c) always comes in the winter.
   (d) comes twice a year.

5. We should appreciate BIE day because

   (a) it gives us an opportunity to see free enterprise in practice.
   (b) gives everyone an opportunity to have a few of the experiences that boys and girls in JA (junior achievement) have and benefit so much from.
   (c) neither of these.
   (d) both of these.

6. When we toured the Continental Tobacco Co. the most important thing the man who conducted us through the plant said was

   (a) we should not smoke before we are at least twelve years old.
   (b) we should stay away from moving machinery.
   (c) we should not believe all we read about smoking causing cancer.
   (d) that most of the money paid for cigarettes is for taxes.

7. The Continental Tobacco Co. is

   (a) one of the 20 largest corporations in the U.S.
   (b) one of the 30 largest corporations in the U.S.
   (c) one of the 40 largest corporations in the U.S.
   (d) one of the 50 largest corporations in the U.S.

8. Which of the following reasons was the best reason given for why the farm subsidies should apply to tobacco growers?

   (a) the government's present practices amount to de facto discrimination.
   (b) the tobacco growers are placed in an unfair competitive position with the grain growers.
   (c) Senator Eastland could then convert some of his cotton land to tobacco production.
   (d) democrats from the farm belt would have a better chance of getting elected to congress.

9. According to the spokesman for the brokerage house of Sherril, Cynch, Post, Fetter and Jones is a member of

   (a) better investments than land.
   (b) better investments than saving accounts.
   (c) poorer investments than saving and loan companies
   (d) better investments than any kind of bonds.

10. Sherril, Cynch, Post, Fetter and Jones is a member of

   (a) the American Stock exchange
   (b) the New York Stock Exchange
   (c) neither of these
   (d) both of these

11. The Dow Jones industrial averages

   (a) has never reached a thousand.
   (b) reached a thousand then fell below a thousand and recovered
   (c) has always been over a thousand.
   (d) will never reach a thousand.

12. On our tour of the Newport Times, we learned that

(a) City editions are always the last edition printed.
(b) City editions are always the first editions printed.
(c) City editions are usually the last editions printed.
(d) City editions are usually the first editions printed.

13. Newsprint used in the printing of the Newpost Times is mostly made from

(a) Pine trees
(b) Hemlock trees
(c) Spruce trees
(d) Douglas fir trees

14. On our tour of the Acme Auto Works, we learned that

(a) the auto industry employs more workers than any other single industry.
(b) the auto industry employs less workers than General Electric and Westinghouse combined.
(c) last year the auto industry had a lower accident rate than any other major American industry.
(d) all of these

15. According to Acme Auto's projected statistics

(a) by 1990 every person in America over the age of 10 will have at least one motor driven vehicle.
(b) by 1990 every person in America over the age of 10 will be able to afford at least one motor driven vehicle.
(c) by 1990 3 out of every 5 persons in America between the ages of 18 and 25 will own a sports car either American made or foreign.
(d) both (b) and (c)

Reexamine each of Mr. Burzynski's test items again. If <u>understanding</u> of a concept or concepts is required in order to sort the choices and select the correct or best choice, place a "U" in the left margin. If knowledge of a fast, opinion, principle and/or generalization is required, place a "K" in the left margin. If you can distinguish between (1) knowledge of facts and (2) knowledge of opinions, place either a "t" or an "O" after the "K". If an item seems to call for a knowledge of a principle or generalization, place a (p or q) after the "K".

Mrs. Harsh always gives unit tests as well as mid-term and final examination. The following items were on her final exam.

1. One of the Three Cardinal Rules of Grammar is

(a) never use split infinitives.
(b) never use simple past tense when past participle is called for.
(c) in informal writing, never end a sentence with a preposition.
(d) always use a conjunction to separate two independent clauses in a complex sentence.

2. In the sentence, "She and I are both 5 feet tall."

   (a) the pronouns 'she' and 'I' should be changed to 'her' and 'me', respectively, in order to make them correct.
   (b) the pronouns 'she' and 'I' are grammatically correct as they are written.
   (c) the pronouns 'she' and 'I' are both in the objective case.
   (d) both (a) and (c).

3. Which of the following statements is in the subjunctive mood?

   (a) Tom is the tallest boy in class.
   (b) If I were you, I would not do that.
   (c) Stop! a train is coming.
   (d) November is the 11th month of the year.

4. Which of the following defines an adverb?

   (a) a word used instead of a noun.
   (b) a word that modifies a noun or pronoun.
   (c) a word used to modify a verb, adjectives, or adver.
   (d) that part of speech which expresses action, existence or condition, and which, above or with adjuncts, combines with a subject to form a sentence.

5. Which of the following defines a verb?

   (a) a word that modifies a noun or pronoun.
   (b) a word used instead of a noun.
   (c) a word used to modify a verb, adjective or adverb.
   (d) that part of speech that expresses action, existence, or condition and which, alone or with adjuncts, combines with a subject to form a sentence.

6. Which of the following is not a regular verb?

   (a) sing
   (b) drink
   (c) swim
   (d) lay

7. Which of the following is not a transitive verb?

   (a) hit
   (b) sit
   (c) bite
   (d) fix

8. Which of the following is not an action verb?

   (a) run
   (b) grow
   (c) are
   (d) meet

9. A word that functions in grammar both as a verb and as adjective is called

   (a) a pronoun
   (b) a preposition
   (c) a participle
   (d) a verbal

10. Which of the following is most important for good writing?

   (a) punctuation
   (b) grammar
   (c) style
   (d) spelling

Reexamine each of Mrs. Harsh's test items again. If understanding of a concept or concepts is required in order to sort the choices and select the correct or best choice, place a "U" in the left margin. If knowledge of a fact, opinion, principle and/or generalization is required, place a "K" in the left margin. If you can distinguish between (1) knowledge of facts and (2) knowledge of opinions, place a "f" or "O" after the "K". If an item seems to call for a knowledge of a principle or generalization, place a (p or q) after the "K".

## Learning Activity #6

Mrs. Harmony has been teaching 7th and 8th grade students for five years. During this time she has become increasingly aware of the difficulty that children experience as they "learn to use language."

They learn many incorrect speech patterns from their parents and peers. She has even had students in the 7th grade who say "He gots ten cents" rather than He has ten cents." She has tried to explain that saying "Johnny got the ball" is different than saying "Johnny has the ball," but they never seem to understand. Expressions such as "I seen" and "I've went" are heard frequently.

One day Jane asked Mrs. Harmony if she would stay after school and help her (Jane) design some stage props for the Christmas play. Mrs. Harmony agreed. Later in the day Mr. Graf, the principal, came by and asked Mrs. Harmony if she could attend a meeting in his office after school. She agreed. Jame overheard their conversation and, when Mr. Graf had left, asked "Mrs. Harmony, aren't you going to stay here and help me design my stage props?" Mrs. Harmony replied that she would not be in the meeting more than ten or fifteen minutes. Then she thought to herself: "Jane really wanted to know if I planned to help her not if I planned to not help her. But why did she say 'aren't?' Why didn't she say 'are?'" It then occurred to Mrs. Harmony that she would have asked the question the same way as Jane did.

That evening Mrs. Harmony did some more thinking about the problems that children have and it suddenly occurred to her that rules of grammar rigidify the expressive potential of children just as much as violations of the rules do. The only difference is that the teacher tells them that one expression is correct and another one is not.

It seems to Mrs. Harmony that the 7th grade is probably a turning point in language arts learning. If students correct their incorrect grammatical speech and writing patterns and habits, they merely substitute one grammatical expression for another. If they have already been conditioned to use the correct expressions, then they merely learn that there is a grammatical license that authorizes them to do what they have been doing.

Mrs. Harmony has always had trouble explaining to her students the relationship between kinds of verbs, on the one hand, and the nominative and objective cases on the other. For example, one day they were waiting for the projectionist who was going to show a film and Billy said "That might be him coming down the hall now." Mrs. Harmony said "No, Billy, you should say, 'That might be he coming down the hall now.'" Billy wanted to know why,, because "him" sounded best to him. When Mrs. Harmony replied that the pronoun was in the nominative case, she realized that as far as the students were concerned, she might just as well have said, "I am right because I am the teacher." They just did not understand.

Mrs. Harmony had done some reading about discovery learning, teaching by induction, and concept formation, so she decided to try to apply some of the ideas to her 7th grade class. She made up the following lesson plan and gave it to half of her students.

Read the following and circle the letter that corresponds to the correct choice.

1. In the sentence, "We boys will do the job."

   a. the pronoun is in the nominative case and is used correctly.
   b. the pronoun is in the objective case and is used correctly.
   c. the pronoun is in the nomitative case and is used incorrectly.
   d. the pronoun is in the objective case and is used incorrectly.

2. In the sentence, "It might have been her",

   a. the pronoun is in the nomitative case and is used correctly
   b. the pronoun is in the objective case and is used correctly
   c. the pronoun is in the nomitative case and is used incorrectly
   d. the pronoun is in the objective case and is used incorrectly

3. In the sentence, "Her and I are good friends",

   a. the pronoun is in the nomitative case and is used correctly
   b. the pronoun is in the objective case and is used correctly
   c. the pronoun is in the nomitative case and is used incorrectly
   d. the pronoun is in the objective case and is used incorrectly

4. In the sentence "Johnny helped his brother do the work" the verb is

   a. an active verb
   b. a linking verb
   c. a state of being verb
   d. a helping verb

5. Action verbs are verbs that

   a. show action
   b. link
   c. help
   d. express existence

6. Linking verbs are verbs that

   a. show action
   b. link
   c. help
   d. express existence

7. Helping verbs are verbs that

   a. show action
   b. link
   c. help
   d. express existence

8. State of being verbs are verbs that

   a. show action
   b. link
   c. help
   d. express existence

9. In the sentence, "Everyone in the stadium felt cold," the verb is

   a. an action verb
   b. link
   c. a helping verb
   d. both b and c

10. In the sentence "The speaker sounded angry," the verb is,

   a. an action verb
   b. a linking verb
   c. a state of being verb
   d. both b and c

The other half of Mrs. Harmony's class received the following lesson plan.

1. In the sentence "John and Mary are brushing their new kitten"

   a. 'John' and 'Mary' are names of people
   b. 'John' and 'Mary' are words that are used to refer to two particular people
   c. 'John' and 'Mary' are used differently
   d. both and b

2. In the sentence, "John and Mary are brushing their new kitten",

   a. 'kitten' is the name for a young cat
   b. 'kitten' names one particular creature rather than just any young cat
   c. 'kitten' is a name just like 'John' and 'Mary'
   d. both b and c

3. In the sentence, "John and Mary are brushing their new kitten".

   a. We learn that John and Mary are doing something to their kitten
   b. We learn that the kitten is doing something to John and Mary
   c. We learn that John and Mary are doing many different things to and for their kitten
   d. both b and c

4. In the sentence "John and Mary are feeling better"

   a. We learn what John and Mary are doing
   b. We learn something about someone or something else besides John and Mary
   c. We learn something particular about John and Mary
   d. We learn something particular about John and Mary in relation to someone or something else

5. In the sentence, "John and Mary are brushing their new kitten",

   a. We separate (1) <u>who does</u> from (2) <u>for whom it is done</u>
   b. John and the new kitten are the ones who do, and Mary is the one for whom something is done
   c. John and Mary are the ones who do, and the new kitten is the one for whom something is done
   d. both a and c

6. In the sentence, "Tom and Sara are brushing their old dog",

   a. We separate (1) who does from (2) for whom is done.
   b. Tom and the old dog are the ones who do, and Sara is the one for whom something is done
   c. Tom and Sara are the ones who do, and the old dog is the one for whom it is done
   d. both a and c

7. In the sentence

   1. John and Mary are brushing their new cat
   2. Tom and Sara are brushing their old dog

   a. the verbs are the same
   b. the verbs are the same word
   c. the verbs are the same word and the meanings of the verbs are the same
   d. all of these

8. In the sentence

   1. John and Mary are brushing their new cat
   2. Tom and Sara are brushing their old dog
   3. Mr. and Mrs. Jones are washing their new car

   a. the verbs are all the same
   b. the verbs are all the same and their meanings are all the same
   c. the verbs are the same in two cases but different in the third case
   d. the verbs are different in each of the three cases

9. In the sentence

   1. John and Mary are feeling better
   2. Tom and Sara are feeling worse

   a. the verbs are the same
   b. the verbs are the same word
   c. the verbs are the same words and the meanings of the verbs are the same
   d. all of these

10. In the sentence

   1. John and Mary are feeling better
   2. Tom and Sara are feeling worse
   3. Mr. and Mrs. Jones are appearing angry.

   a. the verbs are all the same
   b. the verbs are all the same and their meanings are all the same
   c. the verbs are the same in two cases but different in the third
   d. the verbs are different in each of the three cases

Note to teachers and prospective teachers.

At this stage in the lesson plan, the student has been brought through the two main phases of concept formation: he is learning, or has learned, that (1) the meaning of the verb is invariant over (not changed by) subjects and objects and (2) that SOMETHING does not change when one verb is removed from a sentence and another verb if the same type is substituted. But what is the "something" that does not change? Clearly the two sentences

1. Bill and Joe ran down the hill
2. Bill and Joe slid down the hill

are different. So what is it that remains invariant over all sentences of this type?

Similarly, in the two sentences

1. you seemed tired
2. the speaker sounded angry

are different, i.e., different meanings are converged. But what is the similarity? If students reach the stage at which they can identify similarities among verbs because of their function within sentences which are similar to other sentences, according to a very broad, general semantic criterion, and different from other sentences, according to a broad, general, semantive criterion, then, and only then, can it be said that the students have learned the concept.

11. In the sentence

John is brushing his cat

a. 'John' is the name of a person
b. 'cat' is the name for a group of animals
c. 'brushing' is a word that relates the person 'John' to the animal 'cat'
d. all of these

12. In the sentence

John is brushing his cat, we learn

a. what the cat is doing to John
b. what John is doing to the cat
c. what John is not doing to the cat
d. what the cat is not doing to John

13. In the sentence

The cat is licking John's hand, we learn

a. What the cat is doing to John
b. What John is doing to the cat
c. What John is not doing to the cat
d. What the cat is not doing to John

14. In the sentence

John hit Mary, we learn

a. What Mary did to John
b. What Mary did not do to John
c. What John did to Mary
d. What John did not to Mary

15. In the sentence

Mary was hit by John we learn

a. What Mary did to John
b. What Mary did not do to John
c. What John did to Mary
d. What John did not do to Mary

16. In the sentences

1. John Hit Mary and 2. Mary was hit by John.

a. John is the person who did something and Mary is the person to whom or for whom something was done, in the first case, and Mary is the person who did something and John is the person to whom or for whom something was done, in the second case.
b. John is the person who did something and Mary is the person to whom or for whom something was done, in the second case, and Mary is the person who did something and John is the person to whom or for whom something was done, in the first case.
c. John is the person who did something and Mary is the person to whom something was done in both cases.
d. Mary is the person who did something and John was the person to whom or for whom something was done, in both cases

17. In the sentence

Billy ate his sandwich

a. 'Billy' is the name of the person who takes action or does something
b. 'sandwich' is the name of a thing or object that is acted upon
c. 'Billy' is the name of a thing or object that is acted upon
d. 'sandwich' is the name of a person who takes action or does something

Another note to teachers or prospective teachers.

The purpose of item 16 should be clear: to enable the student to "factor out" the order in which the nouns appear in the sentence.

The purpose of item 17 is to extend the learning context to examples on the object side that are not capable of initiating action (e.g., the sandwich).

But at this stage the learner has experienced only one instance of the concept in that context. It would be naive to believe that he (the learner) would not require any further reinforcement. Consider item 18 (involving both direct and indirect objects)

18. In the sentence John threw the ball to Bill

a. John and Bill are persons to whom or for whom something is done
b. Bill is a person to whom or for something is done, and the ball is an object that is acted upon.
c. John is a person to whom or for whom something is done, and the ball is an object that is acted upon.
d. John and Bill are both persons who did something rather than to whom or for whom something is done.

Still another note to teachers and prospective teachers.

At this stage in the learning process the student still requires much more reinforcement at the comprehension level before it can be said that he can apply the concept. Compare this to the ludicrous expectations of traditional teaching: just because the student could state a definition (knowledge of a principle), he should, therefore, be able to apply what he knows (i.e. skip the entire level of comprehension. This is why "word problems" in arithmetic are so "hard").

In order to "speed up" the learning process as much as possible, the next two items or frames will shift the focus back to the "other types of verb." Then the focus will become more general in an attempt to factor out what is non-essential to the concept (particular meaning of individual sentences). Note the relationship to the frames just completed.

19. In the sentence, Joe seems tired

a. 'tired' is the name of a person or thing to whom or for whom something is done
b. 'tired' is the name of an object or thing that is acted upon.
c. 'tired' is merely a characteristic that could be applied to anyone but is applied to Joe in this case
d. 'tired' is the name of a person or thing that is taking actions or doing something to or for another person or thing.

20. In the sentence, Joe is tired

a. 'Joe' is the name of a person who is taking action on another person or thing
b. 'Joe' is the name of a person about whom a judgment is made
c. the word 'is' connects or links the person Joe the word that expresses a judgment made about him.
d. both b and c

Note the shift to a more general level with the use of the operational word 'any' rather than the categorical word 'all'.

21. In any sentence like "John ran to the store"

In contrast to sentences like

"Joe is a fine person."

a. the sentence expresses action or motion that is going on or has gone on in the world.
b. the sentence is about a still, motionless object
c. the sentence may or may not be about a still, motionless object
d. the sentence may or may not express action or motion that is going on or has gone on

22. In sentences like

"Joe is a fine person" in contrast to sentences like

"John ran to the store."

a. the sentence expresses action or motion that is going on or has gone on in the world
b. the sentence is a about a still, motionless object
c. the sentence may or may not be about a still, motionless, object
d. the sentence may or may not express action or motion that is going on or has gone on

23. Similarly, in sentences like - "Jim carried the bag home." - in contrast to sentences like - "Jim has two brothers."

a. Jim is a person who begins, starts, etc. doing something.
b. Jim is merely the name of a particular person about whom a a particular characteristic is said to apply.
c. Jim is merely a characteristic that is said to apply to something or somebody
d. Jim is the name of a person to whom or for whom something is done

24. And, in sentences like - "Jim has two brothers." - in contrast to sentences like - "Jim carried the bag home."

a. Jim is a person who begins, starts, etc. doing something
b. Jim is merely the name of a particular person about whom a particular characteristic is said to apply
c. Jim is merely a characteristic that is said to apply to something or somebody
d. Jim is the name of a person to whom or for whom something is done

25. Also, in sentences like

Tim carved a wooden horse - in contrast to sentences like - Tim has a wooden horse

a. 'wooden horse' is the name of an object that was acted upon.
b. 'wooden horse' is merely the name of characteristics that is said to apply to something or somebody

c. 'wooden horse' is the name of a person to whom or for whom something is done
d. 'wooden horse' is the name of a person who starts, begins, etc. an activity.

Mrs. Harmony referred to the first learning activity as "traditional learning" and to the second learning activity as "modern learning." She then gave each group the following "test," which she called "an opportunity to put their learning (knowledge and/or understanding into practice.

1. When Mary answers the telephone and someone says, "May I speak to Mary please," Mary should say
   a. This is her
   b. This is she
   c. This is Mary
   d. Either b or c

2. John, who was expecting a visit from his brother, looked out the window and said, "This may be he coming up the sidewalk." John

   a. was gramatically correct (It could have been someone else)
   b. should have said, "This may be him coming up the sidewalk."
   c. could have said, "This may be Bill coming up the sidewalk
   d. either a or b

3. If John had said, I see him coming up the sidewalk," he

   a. would have been correct.
   b. would have been incorrect: he should have said, "He is coming up the sidewalk."
   c. would have been correct, but he could have said, "He is coming up the sidewalk."
   d. either a or c

4. Tommy and Teddy were waiting for their friends to arrive for a party. The telephone rang and Tommy answered it. When he had finished talking, Teddy said, "Was it them?" Tommy replied, "Yes, it was them." In this case

   a. Neither boy made any errors in grammar.
   b. Both boys made the same error in grammar.
   c. Tommy made a grammatical error, but Teddy did not.
   d. Teddy made a grammatical error, but Tommy did not.

5. If the verb in the sentence
   John felt tired expressed action,

   a. It would be appropriate to say, "John felt what?"
   b. Another word like 'fido' could be substituted for 'tired' without changing the basic meaning.
   c. Then John would be the person who to whom or for whom something is done.
   d. Either a or b

When Mrs. Harmony passed out the five items to her two learning groups, many students in the traditional group raised their hands and asked questions like could they look at their notes, would the teacher define, again, the different types of verbs, etc.

Students in the modern learning group, on the other hand, spent from 5 to 15 minutes reading and responding to the items. Ten of the thirteen students in the modern learning group responded to each of the five items correctly. Only one person in the traditional learning group responded to every item correctly.

Mrs. Harmony thought that she would give the modern learning group an opportunity to do analysis. For example, if she game them a sentence in active voice like

Mrs. Jones helped us

and everyone agreed that Mrs. Jones is the person who helps and "us" refers to those who are helped, then if she game them the same sentences with the verb changed to passive voice

-----were helped by Mrs. Jones

and asked them to supply the correct pronoun, would they supply "we" or "us"?

She predicted that they would considering using "us" because 'us' refers to those to whom or for whom something was done. However, she also predicted that they would consider using "we" because it "sounded better than 'us'", as the students in the traditional learning group had done on the five application items.

But after Mrs. Harmony thought for a while she realized that she would have to return to the level of the children's experience and teach them the other component of the concept "nominative case". It would be nice if they could synthesize at that level now after some initial analysis. But there was just not any way to do that. A lesson plan designed to elicit analysis, if students were conceptually ready, would elicit only confusion (cognitive dissonance).

University of Toledo

Course 312:328

Module 06: Pre-Planning of Instruction

Fall 1973 Revision/Gentry

312:328

Module Six

I. Department/Context: Educational Media and Technology/Educational Technology

II. Subject/Topic: Programming Instruction/Instructional Program Development

III. Title: Pre-Planning of Instruction

IV. Prerequisite(s): 312:320; Module 5

V. Objectives:

The goal of this module is to provide the pre-service teacher with a general understanding of the various components of an instructional plan and to acquire skills in developing the information necessary within these components for effective planning of instruction. The general and performance objectives for the module are as follows:

A. General

1. To become familiar with the various components of instruction, their interrelationships and the functions that these components serve for planning learning experiences.

2. To develop skills in applying an instructional design system for the pre-planning of instruction on a unit or lesson level that is maximally predictive in its effect on learners.

B. Performance

1. Given an instructional objective, to develop and write a lesson plan that includes the components of goal determination, task analysis, task prescription, implementation, evaluation and revision such that each component will be rated adequate as judged by experts in the field.

2. Given a list of components for planning instruction and a list of description of their functions, to match the component with the functional description, with less than 10% error.

   a. Given various descriptions of specifications within the components necessary for planning instruction, to match the description with its respective component, with less than 15% error.

3. Given a randomized list of the major components for the planning of instruction, to reorder the list in the sequence that it would normally appear, without error.

4. Given a list of concepts basic to effective instructional design and their descriptions, to match each concept with its respective description. This should include the concepts of supra/subsystem, behavioral hierarchy, feedback, interdependence of components, constraints, alternatives, input/output relationship, and revisability characteristic. Error rate should be less than 10%.

VI. Preassessment:

Take the pre-test for this module. If you are successful, continue on to the next module in the sequence. If competency is not met continue on with the activities listed for this module.

VII. Treatment:

1. As an introduction to the content of the module view the slide/tape The Systems Approach.

2. Participate in group activity on the concepts and principles of instructional development.

3. Participate in presentation and discussion on the components of instruction and their implications the development of instructional plans.

4. Read the following articles:

   a. The Classroom as a System
   b. The Use of Behavioral in Instructional Materials Development

5. Independently study the Instructional Components Flowchart.

6. Using the Lesson Plans: Style document, develop a plan for instruction around a performance objective.

7. Compare the plan developed with the criteria listed on the Planning for Instruction: Criterion Checklist. Revise the plan as necessary so that it satisfies the criteria specified on the checklist.

8. Submit the plan for evaluation. If the plan is rated less than a mean of 3 across all criteria on the checklist, revise a necessary and resubmit.

VIII. Postassessment:

Take the post-test for this module. If criterion is met proceed with the next module. If unsatisfactory, consult the Criterion-Objectives-Means list and recycle the necessary activites until mastery is achieved for the module.

## Lesson Plans: Style

Listed below is a suggested physical format that you may wish to follow in writing lesson plans. After each heading is the major question which should be answered within that instructional component.

I. Goal-Determination

A. What is the broad goal area you are planning for?

II. Task Analysis

A. Diagnosis: what information have you to support your choice of objectives for the individuals in the learning mode you are dealing with.
B. What are the specific performance objectives the learner should demonstrate compentence in?
C. Have the objectives been sequenced to reflect a behavioral hierarchy?

III. Task Prescription

A. What strategy/media match have you prescribed for the objectives?
B. Are alternatives necessary and if so what are they?

IV. Implementation

A. What information is necessary for securing necessary materials and equipment?
B. What specifications are necessary for the materials and equipment?

V. Evaluation

A. What criteria will you use to determine if the learner has met the objectives?

VI. Revision

A. (to be completed after the actual instruction) Were you faced with this situation again, what would you do to make the plan more effective and efficient?

Note: All specifications should be stated in such a manner that a professional in the field would be able to replicate the lesson with similar results.

# CRITERION CHECKLIST:

# PLANNING FOR INSTRUCTION

This checklist quantifies the components of instruction so that a relative value can be ascribed to the plan of instruction developed by the student. It should be used to ascertain that each component is accounted for by the developer and serve as indication of the relative value of the planning within each component.

| COMPONENT | CRITERIA |
|---|---|
| | ___1. The goal is stated with sufficient clarity that there is no confusion about who is involved and the nature of their needs. |
| I. GOAL DETERMINATION | ___2. The goal is acceptable to those parties who are to become the ultimate judge of its worth. |
| 0 1 2 3 4 5<br>inadequate adequate | ___3. There is evidence of involving those affected by the goal(s) in establishing its need and priority. |
| | ___1. GO's are described which are congruent with the goal(s) defined. |
| | ___2. TPO's are described which are congruent with the GO's defined. |
| II. TASK ANALYSIS | ___3. EO's are written which are congruent with the TPO's defined. |
| 0 1 2 3 4 5<br>inadequate adequate | ___4. TPO's and EO's contain the four elements of a clearly stated performance objective: audience, behavior, condition and degree. |

___5. TPO's and EO's are sequenced according to some rationale.

___6. Where appropriate, objectives are written in the proper domains.

___7. Objectives represent an adequate array in terms of the levels of learning necessary to master the TPO's.

___8. Adequate criterion items have been established for each perforance objective to determine the learner's progress, mastery and entry behavior.

III. TASK PRESCRIPTION

0 1 2 3 4 5
inadequate adequate

___1. Instructional strategies are described for each performance objective.

___2. When alternative strategies are suggested, the logistical strengths and weaknesses of each are specified.

___3. When alternative strategies are specified for individual learners, the rationale and characteristics of the individual are specified.

IV. IMPLEMENTATION

0 1 2 3 4 5
inadequate adequate

___1. Procedures for identifying, collecting, developing and assembling materials have been specified.

___2. Media forms have been specified for each performance objective.

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___3. Media forms are consistent with the instructional strategies specified.

___4. Materials are arranged into activity sequence to match presentation decisions.

___1. Validation procedure and/or evidence is specified for materials and instruments.

V. EVALUATION/REVISION

___2. Provision is made to accomodate revisions and modifications, based on feedback.

___3. All evaluatiom/ revision decisions are data based.

0 1 2 3 4 5
inadequate adequate

University of Toledo

Course 312:324

Module 07: Children's Literature:
Picture Books for Children

Fall 1973 Revision/Moir

312:324

Module Seven

I. Department/Context: Instructional Organization

II. Subject/Topic: Necessary Training for Instruction

III. Title: Children Literature: Picture Books for Children

IV. Prerequisites: 312:320

V. Overview/Rationale:

Irrespective of the grade level or age of children you will be teaching, books in picture book format play an important role in many areas of the elementary school program. For the younger child, they provide a constant reminder of why learning to read is worth considerable effort to achieve: namely, that there are interesting and significant books worth reading. In addition, because of the variety and quality of the illustrations of many books, this type of book often is the child's initial introduction to the world of art. Therefore, new ideas, memorable characters and events, and captivating visual presentations are readily available to the youngest child who cannot yet read, or is beginning to learn to read. For the older child, books in picture book format present concepts and information related to the areas of science and social studies for those beginning their explanations in these areas.

These are just a few of the ways books in picture book format serve the teacher and pupil in making the development of reading skills a pleasure. For, after all the rhetroic is eliminated, the purpose of reading and the learning of reading is the pleasure the reader derives from his engagement with the book he selects.

VI. Objectives:

1. Given a list of 20 books in picture book format, the student will, with 80% accuracy in each case:

   a. Identify each selection as either a picture book, picture story book, or illustrated book.

   b. Evaluate each book on the basis of the criteria suggested in either:

      1. Children and Their Literature (Georgiou), or
      2. Children's Literature in the Elementary School (Huck and Kuhn).

VII. Treatment:

1. Read either of the following three:

   a. Arbuthnot: Children and Books, pp. 2-19
   b. Huck and Kuhn: Children's Literature in the Elementary School, pp. 4-37.
   c. Georgiou: Children and Their Literature, pp. 3-13.

2. Read either of the following two:

   a. Huck and Kuhn: Chapter 3
   b. Georgiou: Chapter 4

3. Browse through a picture book collection. Plan to spend about an hour at this. Most any school or public library will have an adequate one. As you browse, select 20-25 picture books you think you will want to examine more carefully.

4. Read carefully the 20-25 books you have selected. Note the following elements of each book:

   a. subject matter
   b. medium of illustration
   c. characters
   d. style of the text
   e. format
   f. ways each could be used in a classroom.

5. View the film "Lively Art of Picture Books" available from the University Technological Media Center.

6. Attend at least one scheduled seminar to discuss your observations. To this seminar bring:

   1. List of titles, authors, illustrators
   2. Summary of observations regarding elements noted in #4
   3. Any unanswered questions.

VIII. Post-test:

Upon completion of the readings, library work, viewing the film, and attending at least one scheduled seminar, you should contact the instructor for a copy of the post-test materials.

University of Toledo

Course 312:324

Module 08: Children's Literature:
Poetry for Children

Fall 1973 Revision/Moir

312:324

Module Eight

I. Department/Context: IO

II. Subject/Topic: Necessary Training for Instruction

III. Title: Children's Literature-Poetry for Children

IV. Prerequisites: 312:320

V. Overview/Rationale:

> It has been accepted by many unthinking people that poetry is purely imaginary "stuff" which has little to do with reality. But if the long poetic tradition, which has come down to us from the past, has a visible pattern, it is the pattern of life -- the inner life of mind and heart, and the outer life of the world about us. It is through the poet's intuition of truth that lies at the heart of all life, and which through the medium of art he recreates in his imagination, that is the stuff of poetry.
>
> (Lillian Smith, The Unreluctant Years)

Poetry defies all attempts to confine it by written definition. Neither in terms of form, patternedness, nor language usage alone can we isolate poetry from other language forms and conventions (though at times in our reading we may pause and reflect that "this has a poetic quality to it.") Perhaps the writer was closest to the truth of the matter who said: "Poetry is language that calls attention to a facet of experience in a unique or novel way so as to make that experience have new meaning to the reader or listener. In this way, as for the adult reader, this same purpose and relationship between the poet and his audience is true for the child.

In the course of your experiences with poetry for children you should read slowly, reflectively. Be sensitive to your response to the poet's words and images, and to the source of this response. For only as you can begin to capture the essence of the poetic experience can you aid children in responding to the poems that become part of their literary experiences.

For some of you, this will be easy and enjoyable, for your prior engagements with poetry have sensitized you to the possibilities of this literary form. You can look for and are ready to respond openly to the language forms, imagery, syntax, and phonological patterns, and levels of meaning employed by the poet. For others, your past experiences have dulled your senses and approach to poetry, perhaps even generated a deep feeling of hostility. Too much dissection and analysis, and counting feet and rhyming patterns; too much forced memorization and recitation of poems selected by a teacher; or excessive searching for obscure symbolism or "deep meaning" in selections someone else has decided will "be good for you" has been effective in destroying your enjoyment of poetry.

Yet it is to poetry that the young child responds most openly and appreciatively. To lose this sense of vitality is one of the most tragic examples of the mindlessness in our schools.

Your general concern is to familiarize yourself with the poets, poems, and types of poetry that have been written for, and enjoyed by children of the general age levels with whom you plan to work. There are numerous anthologies and collections of poetry on an almost infinite variety of subjects. Plan many opportunities to read, and in some cases reread those selections that seem to have greater meaning to you. Specific books and poets are suggested to help you begin, but you will want to go far beyond these. As you read, keep in mind that, like other types of literature, poetry is a way of giving expression to the poet's truth and vision. Hence, it is another way by which we, his audience, can know our world differently and more fully through another person's eyes. Perhaps even better.

VI. Objectives:

1. The student will discriminate the elements of poetry that are appropriate in poems for children of varying age or grade levels.

2. Given a list of concept statements, the student will select one concept statement and identify at least twenty poems from anthologies available to him that are consistent with the concept and are appropriate for a grade/age level identified by the student according to subject matter treatment, form, and vocabulary.

3. The student will identify copy onto a separate sheet at least fifty poems and organize these into a poetry collection suitable for use by that student in either a pre-school, primary, or intermediate grade setting. The selections should be appropriate to the age/grade level indicated by the student according to subject matter treatment, form, and vocabulary..

VII. Treatment:

1. Read one of the following selections:

   a. Arbuthnot, Children and Books, pp.
   b. Wituke, Poetry in the Elementary School, pp. 1-29.
   c. Huck and Kuhn, Children's Literature in the Elementary School, pp.
   d. Painter, Poetry and Children, pp. 20-83.

These professional texts present views of the role of poetry in the lives of children, suggest elements of poems to consider for children of varying ages, and in which teachers can enhance a child's engagement with poetry.

2. Read widely in poetry collections using the list of anthologies included with these materials as your guide. Many are complete with an annotation which will help you decide if there are individual poems contained in them appropriate for your grade level. Those with an asterisk are of particular interest.

3. Attend at least one scheduled seminar on poetry. To this seminar you should bring the following:

   a. A plan for organizing the poetry collection for use with either a pre-school, primary, or intermediate grade group;

b. Examples of what poems you would include in this personal collection; and
c. A list of poetry books you've read prior to the seminar.

Note: Since you know what the objectives are for this section on poetry for children, you will probably want to begin your reading of poetry collections immediately, identifying and writing down those poems you will want to include.

VIII. Post-test:

1. At the end of the scheduled seminar(s) ask your instructor for the list of concept statements and other post-test materials regarding the first objective.

2. When you believe you have completed the second objective, present these materials to your instructor. Since it is possible that some of the poems you have selected will not meet the stated criteria (see objective #2), you should include more selections than the minimum number.